



CompacTi -OKO/APULSE Cxx5 Compliance and Safety Information

RED	Council Directive: 2014/53/EU
Harmonized standards EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	Art. 3.1(a) The protection of the health and the safety of persons Information technology equipment. Safety. Part 1: General requirements.
	Art. 3.1(b) EMC
ETSI EN 301 489-1 V2.1.1	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU
Final Draft ETSI EN 301 489-3 V2.1.1	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for Short-Range Devices (SRD) operating on frequencies between 9 kHz and 246 GHz; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
Final Draft ETSI EN 301 489-17 V3.1.1	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
ETSI EN 300 220-2 V3.1.1	Art 3.2 Efficient use and support for efficient use of radio spectrum Short Range Devices (SRD) operating in the frequency range 25 MHz to 1 000 MHz; Part 2: Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU for non specific radio equipment
ETSI EN 300 328 V2.1.1	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
ATEX	Council Directive: 2014/34/EU
Harmonized standards EN 60079-0:2012 + A11:2013 EN 60079-11:2012	Explosive atmospheres Part 0: Equipment – General requirements Explosive atmospheres Part 11: Equipment protection by intrinsic safety "i"
The notified body (ATEX) body identification number has performed and issued the Certificate:	Central Mining Institute, Experimental Mine "Barbara", Poland 1453 conformity assessment procedure according to Module B: EU-Type Examination KDB 18 ATEX 0074X 1st edition II 1G Ex ia IIA T3 Ga
The notified body (ATEX) body identification number has performed and issued the Quality Assurance Notification:	Physical Technical Testing Institute Ostrava-Radvanice, Czech Republic 1026 the manufacturer's quality system assessment procedure according to Module D: Conformity to type based on quality assurance of the production process FTZU 04 ATEX Q 008
Product is certified under IECEx Scheme Rules, IECEx 02 and Operational Documents as amended. IECEx Certificate No.	IECEx KDB 18.0008X
Products are developed and manufactured in an ISO 9001:2015, PN-N-18001, EN ISO/IEC 80079-34:2011 certified facility. Signed for and on behalf of manufacturer:	Prepared by:
 Marek Gabryś Vice President	 Grzegorz Szolc Certification Engineer

Name & Type

Name: CompacTi OKO/APULSE Cxx5 Smart sensor for Clesse Automatic cylinder changeover Device Type: OKO/APULSE Cxx5.

Versions

OKO C505 - GSM modem, no radio interface
OKO CA05 - NB-IoT modem, no radio interface
APULSE C0B5 - no cellular technology, Bluetooth Low Energy (BLE)
APULSE C0F5 - no cellular technology, 868/915 MHz, protocol Lora WAN / SIGFOX / IMR IoT

Compliance

See: EU Declaration of Conformity (shown on the following pages)

ATEX & IECEx marking

OKO/APULSE Cxx5 is intended for use in potentially explosive atmospheres according to the marking:
KDB 18 ATEX 0074X

II 1G Ex ia IIA T3 Ga
IECEx KDB 18.0008X
Ex ia IIA T3 Ga



Technical Parameters

Producer	AIUT Sp. z o.o. (Ltd.)
Ingress protection	IP 65
Operating temperature	-25°C ÷ +55°C
Radio frequency range	433 .2600 MHz
Maximum radiated power	2W

Intrinsically Safe Parameters

SMA antenna connector:	
Max. output voltage Uo	10V
Max. output current Io	0.2A
Max. output power Po	2W
Max. external capacitance Co	1µF
Max. external inductance Li	1µH

Power Supply

Use only replaceable battery pack exclusively designed and supplied from Clesse or authorised distributors Manufacturer : AIUT Sp. z o.o. [Ltd]. Type of battery for OKO Cxx5 **ABAT M052-12C5-Z000**
for APULSE **ABAT U265-12C5-Z000**
Cxx5ABAT P175-12C5-Z000

In potentially explosive areas the battery can be replaced only by authorized personnel.

Special conditions of use in potentially explosive areas

- Ambient temperature range: -250C to 550C
- The device must be embedded in such a way that its casing is not available externally (except for SMA connector and a label).
- Metal parts of SMA connector must be secured with non-conductive cover.
- During transport and assembly/ disassembly of the device and its battery in potentially explosive areas, special measures must be taken to avoid the accumulation of electrostatic charges on theenclosures.

Environment

Do not throw away the appliance with the normal household waste at the end of its life, but hand it in at an official collection point for recycling. By doing this you help to preserve the environment (Fig. 1)
Always remove the battery before you discard or hand in the appliance at an official collection point. Dispose of the battery at an official collection point for batteries. (Fig.2)



Fig. 1



Fig. 2

File: Doc_OKO_Cox5_eng_v1.pdf		Gliwice, February 2019	
EU DECLARATION OF CONFORMITY			
Product			
OKO Cxx5 Smart Automatic Changeover			
Name and address of the manufacturer	AIUT Sp. z o.o., ul. Wyczołkowskiego 113, 44-109 Gliwice, Poland Tel.: +48 32 775 40 00, Fax: +48 32 775 40 01 e-mail: biuro@aiut.com		
This declaration of conformity is issued under the sole responsibility of the manufacturer.			
Object of the declaration	<p>OKO Cxx5 a smart automatic changeover is an intrinsically safe device designed to monitor the cylinders reserve level. The data about its position is acquired with the use of magnetic sensors and sent over GMS/ LTE/ NB-IoT service to acquisition server.</p> <p>The device is integrated with the enclosure of the bottle switch. OKO Cxx5 consists of two encapsulated parts: battery packet and the main part including the majority of electronic components.</p> <p>OKO Cxx5 is powered by a replaceable battery pack containing the primary cell. The GMS/LTE/NB-IoT modem has SMA socket for external antenna. The Bluetooth module has an integral antenna mounted inside the housing.</p>		
			
The object of the declaration described above is in conformity with the relevant Union harmonisation legislation.			
References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:			
RED	Council Directive: 2014/53/EU		
Harmonized standards	Art. 3.1a) The protection of the health and the safety of persons		
EN 60950-1:2006 + A11:2009 + A1:2010 + A12:2011 + A2:2013	Information technology equipment. Safety. Part 1: General requirements.		
	Art. 3.1b) EMC		
ETSI EN 301 489-1 V2.1.1	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU		
Draft ETSI EN 301 489-52 V1.1.0	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 52: Specific conditions for Cellular Communication Mobile and portable (UE) radio and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU		
Final Draft ETSI EN 301 489-17 V3.1.1	Electromagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU		
	Art 3.2 Efficient use and support for efficient use of radio spectrum		
ETSI EN 301 511 V12.5.1	Global System for Mobile communications (GSM); Mobile Stations (MS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU		
ETSI EN 300 328 V2.1.1	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU		

ATEX	Council Directive: 2014/34/EU
Harmonized standards	
EN 60079-0:2012 + A11:2013	Explosive atmospheres Part 0: Equipment - General requirements
EN 60079-11:2012	Explosive atmospheres Part 11: Equipment protection by intrinsic safety "I"
The notified body (ATEX)	Central Mining Institute, Experimental Mine "Barbara", Poland
body identification number	1453
has performed	conformity assessment procedure according to Module B: EU-Type Examination
and issued the Certificate:	KDB 18 ATEX 0074X 1st edition  II 1G Ex ia IIA T3 Ga
The notified body (ATEX)	Physical Technical Testing Institute Ostrava-Radvanice, Czech Republic
body identification number	1026
has performed	the manufacturer's quality system assessment procedure according to Module D: Conformity to type based on quality assurance of the production process
and issued the Quality Assurance Notification:	FTZU 04 ATEX Q 008
Product is certified under IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.	
IECEx Certificate No.	IECEx KDB 18.0008X
Products are developed and manufactured in an ISO 9001:2015, PN-N-18001, EN ISO/IEC 80079-34:2011 certified factory.	
Signed for and on behalf of manufacturer:	
Prepared by:	
 	
Marek Gabryś Vice President	Grzegorz Szolc Certification Engineer
	

File: Doc_APULSE_Cox5_eng_v1.pdf		Gliwice, February 2019	
EU DECLARATION OF CONFORMITY			
Product			
APULSE Cxx5 Smart Automatic Changeover			
Name and address of the manufacturer	AIUT Sp. z o.o., ul. Wyczołkowskiego 113, 44-109 Gliwice, Poland Tel.: +48 32 775 40 00, Fax: +48 32 775 40 01 e-mail: biuro@aiut.com		
This declaration of conformity is issued under the sole responsibility of the manufacturer.			
Object of the declaration	<p>APULSE Cxx5 a smart automatic changeover is an intrinsically safe device designed to monitor the cylinders reserve level. The data about its position is acquired with the use of magnetic sensors and sent over LoRa and Bluetooth wireless interfaces.</p> <p>The device is integrated with the enclosure of the bottle switch. APULSE Cxx5 consists of two encapsulated parts: battery packet and the main part including the majority of electronic components.</p> <p>APULSE Cxx5 is powered by a replaceable battery pack containing the primary cell. The LoRa radio interface has SMA socket for external antenna. The Bluetooth module has an integral antenna mounted inside the housing.</p>		
			
The object of the declaration described above is in conformity with the relevant Union harmonisation legislation.			
References to the relevant harmonised standards used or references to the other technical specifications in relation to which conformity is declared:			