

ALEVEL 0275

User Manual

CONTENTS

1	DISCLAIMER.....	2
2	Product overview.....	3
2.1	Operating Principle.....	3
3	Functional & Technical Features.....	3
4	Installation.....	4
4.1	Installation on-site.....	4
4.2	ALEVEL 0275 activation.....	4
5	FCC/ISED Regulatory notices.....	4

Document Version: 06.02.2017 EN

1 DISCLAIMER



READ INSTRUCTIONS - all the safety and operational instructions should be read before the product is operated



TRANSPORT – every item removed from the multipack must be properly secured (e.g. with bubble wrap) for further transport



ACCESSORIES – the installation of the product should follow the manufacturer's instructions and should use mounting accessory recommended by the manufacturer



RECYCLING – the used devices should be returned to the manufacturer for proper disposal



REPLACEMENT PARTS – when replacement parts are required, make sure that only replacement parts specified by the manufacturer are used



SPECIAL USAGE CONDITIONS

- Increased ambient temperature range: $-40^{\circ}\text{C} \div +60^{\circ}\text{C}$
- IP 68 – device protected against dust penetration and immersion in water (up to 1 meter). Whenever it is necessary to open the cover, secure the device against dust and moisture by other means
- Never rub the enclosure surface of ALEVEL 0275 using a dry cloth because of the danger of electrostatic discharge



WARRANTY – failure to follow the instruction or any modifications/alternations in the operations described in this instruction may void the warranty



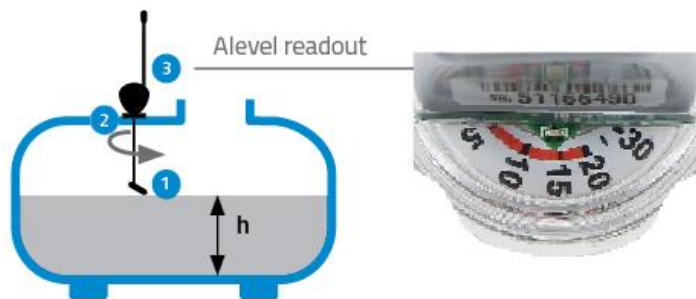
VIBRATION - product is not designed to work in heavy vibration or mobile application

2 Product overview

ALEVEL 0275 is a smart LPG tank sensor that provides wireless communication either autonomously with IoT (LPWAN) technologies or with external gateway. OKO 5875 battery powered is a recommended gateway that collects data from up to 6 ALEVEL 0275 devices in range. ALEVEL 0275 is engineered for direct & easy installation on various types of LPG tanks. Its own mechanical dial fits typical float arm level gauges.

2.1 Operating Principle

ALEVEL 0275 reads LPG level in tanks and sends the data periodically over radio link. The movement of the arm (1) results in the circular motion of the magnet (2) and the change of magnetic field - ALEVEL reads the magnetic field direction based on the Hall Effect sensor. Obtained value is



converted to an output that is indicative of the float arm position and hence the amount of fuel contained within the tank. Additionally, the built-in mechanical level indicator allows immediate visual readout regardless the electronics (3).



3 Functional & Technical Features

General Features

Dimensions : H x H (with antenna) x W x D:
45mm x 120mm x 55mm x 45mm

Communication

Radio frequency:
902 – 928 MHz non-licensed band,
Radiated power: < 1mW.
Radio range: 200m for above-ground tanks,
20m underground.
FCC Part 15.249 compliant transmitter.

Environmental Parameters for ALEVEL 0275

Operating temperature : -40°C to +60°C
IP 68 – can work submerged in 0.5 meters water deep (may reduce radio communication range).
UV resistant.

Power supply

Non replaceable Lithium battery, 5 years lifetime.
ALEVEL 0275 is able to provide battery level and the estimated lifetime.

Sensor & Readout Data

Data trasmitted over radio link every 3 minutes.
Trasmitted data: tank level, temperature, battery status.
Measuring the direction of the magnetic field, Hall effect sensor.
Resolution 1%, the total accuracy of 5%.
Ambient temperature sensor, accuracy: + -3 °C.

4 Installation

The casing of ALEVEL 0275 is sealed and non-openable. The device is equipped with non-replaceable battery. If the battery of the device is discharged it should be replaced with new ALEVEL 0275.

4.1 Installation on-site

The installation process is easy, intuitive and only requires replacing the original dial and fixing ALEVEL 0275 with two original bolts. Simply unscrew the original dial bolts, take out the original dial and place ALEVEL 0275 on the gauge.



4.2 ALEVEL 0275 activation

For safe transport and in order to minimize the battery consumption during the storage (prior the installation), the device is in sleep mode directly after the production. To wake ALEVEL 0275 up a dedicated tool¹ is required.

5 FCC/ISED Regulatory notices

ALEVEL 0275 FCC ID: 2AKQSALE0275 IC: 22378-ALEVEL0275

Modification statement

AIUT Sp. z o.o. [Ltd.] has not approved any changes or modifications to this device by the user. Any changes or modifications could void the user's authority to operate the equipment.

AIUT Sp. z o.o.[Ltd.] n'approuve aucune modification apportée à l'appareil par l'utilisateur, quelle qu'en soit la nature. Tout changement ou modification peuvent annuler le droit d'utilisation de l'appareil par l'utilisateur.

Interference statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

¹ Available from the manufacturer: AIUT Sp. z o.o. [Ltd.] upon request.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Wireless notice

This device complies with FCC/ISED radiation exposure limits set forth for an uncontrolled environment and meets the FCC radio frequency (RF) Exposure Guidelines and RSS-102 of the ISED radio frequency (RF) Exposure rules. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

This device needs to be installed and used on distance greater than 20 cm from human body.

Le présent appareil est conforme à l'exposition aux radiations FCC / ISED définies pour un environnement non contrôlé et répond aux directives d'exposition de la fréquence de la FCC radiofréquence (RF) et RSS-102 de la fréquence radio (RF) ISED règles d'exposition. L'émetteur ne doit pas être colocalisé ni fonctionner conjointement avec à autre antenne ou autre émetteur.

Cet appareil doit être installé et utilisé à une distance supérieure à 20 cm du corps humain.

FCC Class B digital device notice

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

CAN ICES-3 (B) / NMB-3 (B)

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de classe B est conforme à la norme canadienne NMB-003.