



EC-TYPE EXAMINATION CERTIFICATE

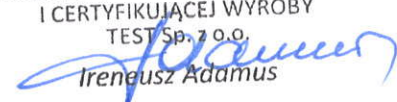
- (1)
- (2) Directive 94/9/EC introduced into Polish law by Minister of Economy Decree of 22 December 2005 on the Essential Health and Safety Requirements relating to equipment and protective systems intended for use in potentially explosive atmospheres (O. J. No. 263, pos. 2203).
- (3) EC-Type Examination Certificate No. **TEST 13 ATEX 0077X**
- (4) Product name: **Mining access point GPD-3**
- (5) Manufacturer name: **ROOTTEL Sp. z o.o.**
- (6) Manufacturer address: **40-189 Katowice, Leopolda 29, Poland**
- (7) This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate; the schedule may also include possible supplements to this certificate and documents referred to.
- (8) Jednostka Opiniująca, Atestująca i Certyfikująca Wyroby TEST Sp. z o.o. (“TEST” Product Assessment, Approval and Certification Body Ltd.), notified body number 2057 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The assessment and test results are recorded in confidential report No. TEST/RW/20/13/AP.
- (9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards:
- | | | |
|--|--|--|
| PN-EN 60079-0:2009
(EN 60079-0:2009) | PN-EN 60079-11:2012
(EN 60079-11:2012) | PN-EN 60079-18:2011
(EN 60079-18:2009) |
| PN-EN 60079-28:2010
(EN 60079-28:2007) | PN-EN 50303:2004
(EN 50303:2000) | |
- (10) If the sign „X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for use specified in the Schedule to this certificate.
- (11) This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system, according to the Directive 94/9/EC. The certificate does not cover the Directive requirements relating to the process of manufacture and placing the equipment or protective system on the market.
- (12) The marking of the equipment or protective system shall include the following:

 **I M1 Ex ia ma I Ma**

 **I M1 Ex ia ma op is I Ma** (version with fiber optic outputs)

- (13) This certificate is valid in its entirety, schedule(s) included.



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(14)

SCHEDULE

(15)

EC-TYPE EXAMINATION CERTIFICATE TEST 13 ATEX 0077X

(16)

Description of Ex equipment or protective system:

Enclosure of the mining access point GPD-3 is made of ABS material, consists of two chambers joined together - main chamber with electronics of the device and a terminal chamber. Printed circuits are protected in the main chamber by compound encapsulation. Outside the compound there are elements of antenna, Ethernet cables, LEDs indicating work of the access point, power supply connectors and fuses. One surface of each of the encapsulated PCB is antenna reflector mounted on a printed circuit board. In the main chamber there are two encapsulated modules of access points and intrinsically safe network switch, which does not require the use of encapsulation. In the terminal chamber, terminal blocks are available for connection to Ethernet network and a terminal block used for 12V DC power supply connection from intrinsically safe power supply. Version of the device with Ethernet, in the form of fiber, has connections for single-mode fiber instead of terminal blocks.

The mining access point is equipped with Ex component holding EC-type examination certificate:

- Ethernet transmission converter KTE-1-SW certificate no. TEST 13 ATEX 0004U

Technical characteristics:

Power supply voltage	9V ÷ 14V DC
Ambient temperature	0°C ≤ Tamb ≤ +40°C
Permissible humidity	95% (without condensation)
Enclosure protection level	IP 54
Dimensions	240 x 310 x 120 mm
Mass	approx. 1 kg

Intrinsically safe parameters:

Power supply, L1 terminal block, terminals (Z1-Z2):

Maximum input voltage $U_i = 14 \text{ V}$

Ethernet, L2 terminal block, terminals (Z3-Z4, Z5-Z6):

L3 terminal block, terminals (Z7-Z8, Z9-Z10)

Maximum input voltage	$U_i = 5 \text{ V}$
Maximum input current	$I_i = 272 \text{ mA}$
Maximum output voltage	$U_o = 4,935 \text{ V}$
Maximum output current	$I_o = 272 \text{ mA}$
Maximum external inductance	$L_o = 6 \text{ mH}$
Insignificant parameters	L_i, C_i, C_o

Fiber optic communication:

Maximum output power $< 20 \text{ mW}$



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- (17) Test reports:
- “TEST” Product Assessment, Approval and Certification Body Ltd. Research Laboratory. Test report no. LT/074/2013. Testing of mining access point GPD-3. Siemianowice Śl., 28.10.2013.
 - “TEST” Product Assessment, Approval and Certification Body Ltd. Research Laboratory. Test report no. LT/173/2013. Testing of epoxide casting resin Araldite CW 2243 with hardener HY 2966. Siemianowice Śl., 31.10.2013.
- (18) Special conditions for use:
- ambient temperature is:
 $0\text{ °C} \leq T_{amb} \leq +40\text{ °C}$.
- (19) Compliance with Essential Health and Safety Requirements has been assured by conformity with standards specified in item 9 of this certificate.



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