



AC 038



KDB ATEX



Główny Instytut Górnictwa
Jednostka Certyfikująca
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This certificate and its
schedules may only be
reproduced in its entirety and
without change

Product certification program
no: PCW-ISO/IEC-1b
CODE ICS 13.230

[1] EC-TYPE EXAMINATION CERTIFICATE



[2] Equipment, protective systems and components intended for use in
potentially explosive atmospheres - Directive 94/9/EC

[3] EC – type examination certificate:

KDB 05ATEX093X

[4] Equipment:

Blasting ohmmeter type OSH-1

[5] Manufacturer:

„HASO” s.c. J. Macioszek & A. Paszek

[6] Address:

ul. Rodakowskiego 5, 43-100 Tychy, Poland

[7] This equipment and any acceptable variation thereto is specified in the schedule to this
certificate and the documents therein referred to.

[8] Główny Instytut Górnictwa, Notified Body number 1453 in accordance with Article 9 of
Directive 94/9/EC of 23 March 1994, certifies that this equipment and protective system has
been found to comply with the Essential Health and Safety Requirements relating to the
design and construction of equipment and protective systems intended for use in potentially
explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report
KDB No. 05.085 [T-5409]

[9] Compliance with the Essential Health and Safety Requirements has been assured by
compliance with:

EN 13763-26: 2004

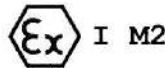
p. 5, 7, 23.4.3 EN 50014: 2004;

p. 6, 7, 8, 10 EN 50020: 2005.

[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 safe use specified in the schedule to this
certificate.

[11] This EC-type examination certificate relates only to the design and construction of the
specified equipment and protective system in accordance with Directive 94/9/EC.
Further requirements of the Directive may apply to the manufacturing process and supply of
this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment shall include the following:



Specjalista ds. Certyfikacji
Urządzeń Przeciwybuchowych

dr inż. Michał Górny



KIEROWNIK
Zespołu Certyfikacji Wyrobów
KD „BARBARA” Mikołów
dr hab. inż. Krzysztof Cybulski, prof. GIG

Date of issue: 14.07.2005

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SCHEDULE

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EC-Type Examination Certificate KDB 05ATEX093X

[15] Description:

Blasting ohmmeter OSH-1 is designed to measure the resistance of blasting lines, blasting circuits and single electric detonators. The measurements can be done close to blast holes loaded with explosive materials.

The casing of the ohmmeter made of ABS type plastic contains: analog/digital converter, automatic range switching unit, LCD display and current limiters.

The ohmmeter is powered by zinc - carbon battery type 6F22, which is located in separated part of the casing covered with lid. The ohmmeter shall be used and carried in leather etui.

Technical parameters:

Measurement ranges:	00,00 ÷ 99,99Ω and 100,0 ÷ 1999,9Ω automatic range switch
Measuring accuracy:	±2%
Measurement current:	≤1mA
Ingress protection	IP65
Working temperature range:	-10°C ÷ 40°C

Parameters of intrinsically-safe measuring circuit

$U_o = 10.35V$, $I_o = 1.1 mA$



SCHEDULE

EC-Type Examination Certificate KDB 05ATEX093X

[16] Test report:

Report No 59/05 blasting equipment examination
Report KDB No 05.085

[17] Special conditions for safe use:

- The ohmmeter can be powered only by zinc - carbon batteries type 6F22 from manufacturers listed in operation manual.
- Batteries can be replaced only in not explosion hazardous area.
- The ohmmeter can be used only in leather etui.

[18] Essential health and safety requirements:

Met by compliance with standards listed below:

- EN 13763-26:2004; (PN-EN 13763-26:2005 oryg),
p. 5,7,23.4.3 EN 50014: 1997 +A1+A2; (p.5,7,23.4.3 PN-EN 50014:2004)
p. 6,7,8,10 EN 50020: 2002; (PN-EN 50020:2005).

[19] List of agreeded documentation:

Technical description	OT 1120	December 2004
Technical documentation with drawings and documents:	DT 1120	December 2004
Circuit schematic	E 1120	20.01.2005
Bill of materials	E 1120.M	12.2004
Blasting ohmmeter OSH-1 (assembly drawing)	M 1120	12.04
Casing	M.1120.1	12.04
Printed circuit of input section	M.1120.2	12.04
Printed circuit of display	M.1120.3	12.04
Information plate	M.1120.4	12.04
LCD screen protector	M.1120.5	12.04
Description of casing	M.1120.6	12.04
Leather etui	M.1120.7	12.04
Technical conditions of acceptance	WTO 1120	December 2004
Operation manual	IO 1120	December 2004