ISO 9001
OBAC/002/SZJ/20

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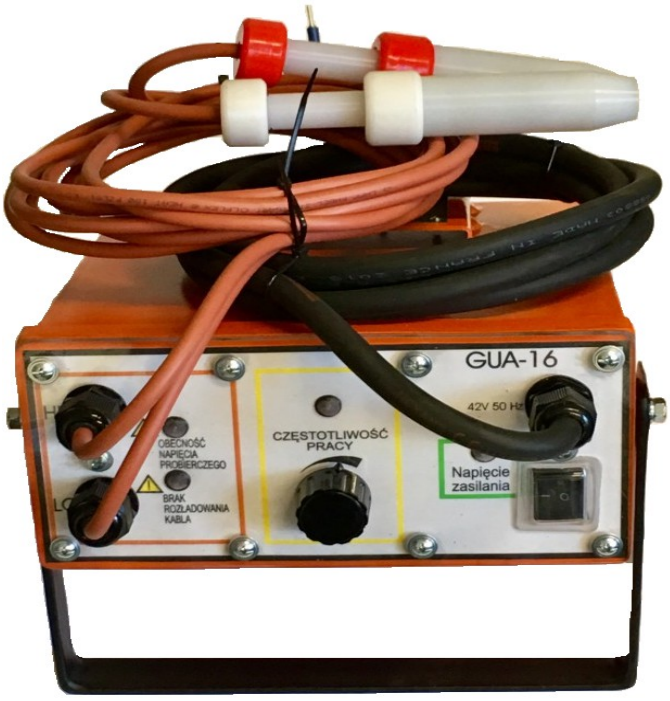
INDEX CARD

Acoustic shock generator GUA-16

Application:



The GUA-16 shock generator was developed as a portable, special device of normal construction used to locate faults in power cables and tire cables with a rated voltage of up to 1000V.

It can be used to locate damage to cables and wires supplying mining, transport, mobile, transportable and manual devices installed in underground workings (rooms) of mines.

When using the GUA-16 shock generator in workings (rooms) classified as "b" and / or "c" of the methane explosion hazard pursuant to the Regulation of the Minister of Energy of November 23, 2016. on detailed requirements for the operation of underground mining plants - point 5.11, the following conditions must be met:

a) the location will be performed by persons on the basis of a written order or in the manner specified in the detailed instructions for safe performance of these works and tests, approved by the manager of the mining plant operations,

b) the dispatcher will be notified about the commencement and completion of the localization,

c)the location does not begin or it is interrupted if a methane content greater than 0.5% is found along the route of a damaged cable or wire,

The use of a shock generator allows personnel to visually or audibly locate a damaged cable or conductor.

Construction

The GUA-16 shock generator is made in a dustproof, rectangular metal casing, equipped with a movable carrying handle. The integral equipment of the device includes:

- three-core power cord,
- test leads terminated with clamps,

The signaling and regulating elements of the device are installed on the metal front plate. These elements are protected against damage with a transparent plexiglass plate, ensuring their good visibility and legibility of the inscriptions. All handling elements necessary to operate the device are available on the front panel.
The device has been designed to ensure full safety for the operator.

Technical data of the GUA-16 acoustic shock generator:	
Rated voltage of the supply U_N	42 [V]
Range of supply voltage changes	(0,85÷1,1) U_N
Rated phase current I_N	750 m[A]
Rated frequency f_N	50 [Hz]
Test voltage U	4000 [V] DC ± 25%
Nominal energy of the test pulse	16 [J]
Duration of the test pulse	450 [ms] ± 10%
The frequency of test pulses	set manually
Test frequency setting range	(10÷40) min-1

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Technical data of the GUA-16 acoustic shock generator:	
The degree of protection of the housing	IP54
Dimensions	310x260x105 [mm]
Mass	(10 ± 0,5) kg
Working conditions	
- temperature	-5°C ÷ +40°C
- relative humidity	≤ 93% w temp. 40°C
- sinusoidal vibrations	(10÷35)Hz/amplitude ≤ 0,15mm
- position during work	any
- maximum duration of continuous operation	1h
- minimum break time	2h

The GUA-16 Acoustic Shock Generator meets the requirements of the following standards and regulations:

- Regulation of the Minister of Energy of November 23, 2016. on detailed requirements for the operation of underground mining plants, together with attachments.
- Operation and control of machinery, equipment and electrical installations in excavations - point 5 of the above-mentioned regulation.
- **PN-EN 61557-1:2009** – Electrical safety in low-voltage power networks with alternating voltages up to 1000 V and direct voltages up to 1500 V - Devices intended for checking, measuring or monitoring protective measures. Part 1: General requirements.
- **PN-EN 61557-9:2015-03** – Electrical safety in low-voltage power networks with alternating voltages up to 1000 V and direct voltages up to 1500 V - Devices intended for checking, measuring or monitoring protective measures. Lot 9: Equipment for isolation fault localization in IT networks.
- **PN-EN 61010-1:2011** – Safety requirements for electrical measuring instruments, automation and laboratory devices. Part 1: General requirements.
- **PN-EN 60664-1:2011** – Coordination of the insulation of electrical devices in low voltage systems. Part 1: Principles, Requirements and Research.
- **PN-EN 61000-6-2:2008** – Electromagnetic Compatibility (EMC). Part 6-2: General standards. Resistance in industrial environments.
- **PN-EN 61000-6-4:2008** – Electromagnetic Compatibility (EMC). Part 6-4: General standards Emission standard for industrial environments.
- **PN-EN 61326-1:2013-06** – Electrical equipment for measurement, control and use in laboratories - Electromagnetic compatibility (EMC) requirements - Part 1: General requirements.
- **PN-EN 60529:2003** – Degrees of protection provided by enclosures (IP CODE)

After research and positive feedback:
- Center for Electrification and Automation of Mining EMAG, Attestation Opinion nr **4190/02**, may 2002
- Research and Design Laboratory EMAG, Report nr **973/2007** - "Electromagnetic compatibility the testing of deviceGUA-16", 22.10.2007

The GUA-16 Acoustic Shock Generator has been given the mark CE.

CE marking placed on the product is the manufacturer's declaration that the marked product meets the requirements of the so-called directives. The "New Approach" of the European Union (EU).