

EDA

ELECTRO-EXPLOSIVE DEVICES ANALYZER

The EDA™ Electro-explosive Devices Analyzer is a universal measuring and control unit serving for precisely-defined ignition of samples of energetic materials or explosive devices, combined with the simultaneous high-speed measurement of dynamic pressure, temperature and emitted light.



The EDA allows for precise adjustment of ignition current value and time for generation of precise constant current, voltage or power impulse. Maximum pressure, burning time, ignition delay time, current and voltage levels, pressure gradient, pressure rise time and/or the burning rate may be recorded and evaluated.

APPLICATIONS

The EDA is a necessary accessory for ballistic experiments with gun and rocket propellants in closed vessels (TSV Series and HPA 1500), as well as for testing electric initiators (fuse-heads, squibs, detonators etc.) in research, development, quality control, qualification and surveillance programs.

The explosive and automotive industry, research, development and quality control laboratories around the world rely on the EDA for its precision and reliability.

ADVANTAGES & FEATURES

- ▶ Compact solution for both proper ignition and high-speed measurement
- ▶ Precise current source with guaranteed rise time
- ▶ Determination of bridge-wire resistance of ignition elements
- ▶ Adjustment of ignition current, voltage or power level and impulse duration
- ▶ Two different control units designed for different applications available
- ▶ Strain-gauge transducers for static and dynamic measurements or piezoelectric transducers for dynamic measurements of pressure, force, acceleration etc.
- ▶ Temperature and emitted light sensors available for incorporation
- ▶ The ABSW™ software for calibration, measurement, control of the pulse current source and results evaluation



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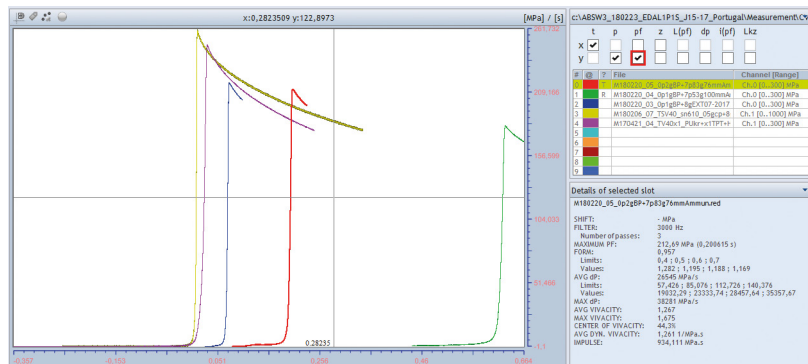
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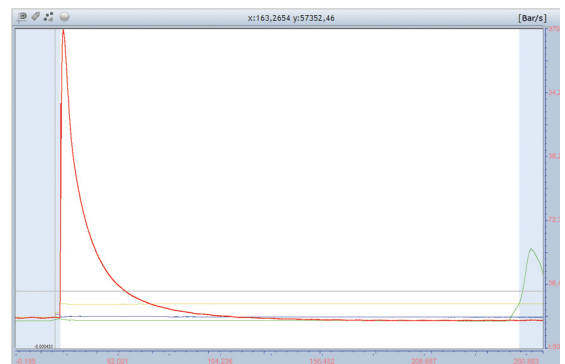
There are two basic versions of **EDA** analyzer available:

Version	EDA ^{*)}	EDA Light
Current rise time	≤ 20 μs	≤ 50 μs
Max output current and voltage	10 A / 20 V	11 A / 22 V
Measurement and recording of ignition current and voltage	YES	NO
No of optional inputs	2	4
Current flow trigger signal	YES, adjustable from recorded signal	YES, ON/OFF only
Typical applications	Testing of electric igniters and detonators with measurement of ignition voltage and current	Testing of energetic materials by measurement of burning pressure in the closed vessels

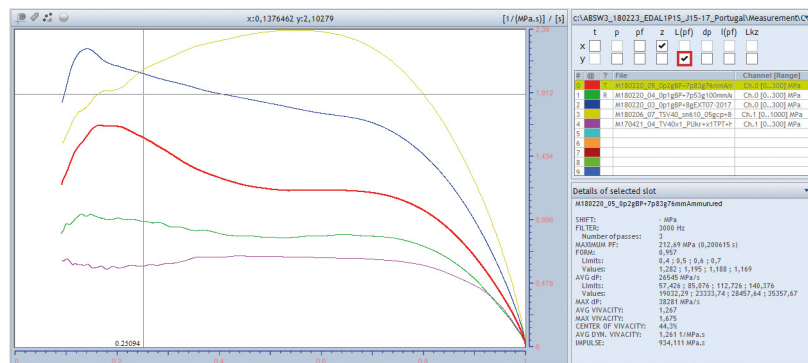
*) On request only



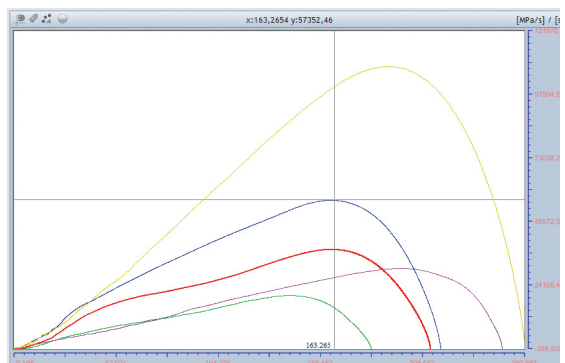
Burning pressure-time profiles of different smokeless powders in a closed vessel before evaluation



Evaluation of a delay time of an igniter – two pressure values, together with the ignition voltage and current



Evaluated dependence of Vivacity on the propellant burnt mass ratio



Evaluated dependence of the pressure gradient on pressure

COMPLIANCE

- EN 13763-16
- EN 13763-17
- EN 13763-18
- EN 13763-19
- EN 13763-20
- EN 16265
- ISO 14451-2
- SAE/USCAR 28



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