TSA QUALIFIED

TYPE B STANDARD 3 CERTIFIED

TYPE A STANDARD 3 CERTIFIED

EMA SERIES

LIQUID EXPLOSIVE DETECTOR

KEY FEATURES

- Accurate automatic inspection of sealed and unsealed LAGs (Liquids, Aerosols and Gels) in ~ 5 sec. (Type B) and ~ 4 sec. (Type A*)
- Compact size and ergonomic design
- Certified to screen liquids in clear, colored and opaque plastic and glass, metal and metallized containers
- Very low combined Nuisance Alarm Rate: < 0.4%
- No-ionizing source or part in movements
- No maintenance required

* Optional

NSNs: 6665-151805235 / 6665-151805236

GSA Contract Holder

CEIA® USA

www.ceia-usa.com

CERTIFIED SAFETY ACT

THREAT DETECTION THROUGH ELECTROMAGNETICS

The EMA is a compact device designed for the analysis of liquid containers and their contents with the goal of **detecting the possible presence of explosive precursors and explosive liquids**.

When the operator places the bottle in the inspection cavity, its presence is automatically detected and **the analysis is performed in ~ 5 seconds**.

GENERAL DESCRIPTION

The EMA is a compact device designed for the analysis of liquid containers and their contents with the goal of detecting the possible presence of explosive precursors and explosive liquids.

The content of the bottles is analyzed without the need to open the container as **the detection uses simultaneous multiple sensing technologies**.

The housing of the analyzer, which is extremely robust, durable and easy to clean, is made of AISI 304 Stainless Steel and anti-friction plastic.

The Analyzer consists of a main body, a control panel and an analysis compartment. In case of open containers such as cups and thermos flasks, it is possible to carry out the analysis by means of the **type A integrated analyzer** (optional), using small disposable plastic sample cups to be inserted into an external probe.

INSPECTION OF BOTTLES OR CONTAINERS

- Independently of their shape
- Made of different materials
- In a wide range of capacity

EXTERNAL PROBE
(optional for loose liquids inspection - EU Type A)

EMA TYPE B OPERATIONAL SEQUENCE

1

The operator inserts the container to be checked and leaves it in the inspection cavity.

2

The analysis is activated automatically. The display shows the analysis progress.

The detection capability of the certified CEIA EMA LAGs* analyzer exceeds current International requirements as it is able to detect additional dangerous substances.

CEIA EMA AND LEDS REQUIREMENTS

Type B Liquid Explosive Detection Systems are intended for the inspection of individual liquid containers with the purpose of detecting explosives and their precursors, according to the current Regulation Authority requirements (EU Reg. No 185/2010).

As containers can be made of different materials and can have different shapes and volume, the use of multiple simultaneous physical principles is necessary for a reliable and secure screening.

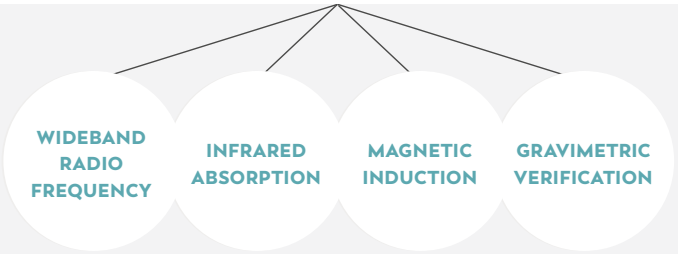
The EMA analyzer family design started in 2003; since then the number of sensors have increased in order to comply with the increasing requirements of the liquid threats to be detected and on the kind of containers to be inspected. The comprehensive set of sensors installed on the equipment makes the EMA liquid analyzer a **unique system that provides very high security and can be set for future detection requirements**.

The EMA includes an EU Standard 3 Certified type A analyser (optional) to screen liquids, open containers or follow up to an alarm on the type B section. A disposable cup allows sampling and measurement of a minimum quantity of liquid to be analyzed.

*LAGs: Liquids, Aerosols and Gels

OPERATING PRINCIPLE

MULTIPLE SIMULTANEOUS SENSING TECHNOLOGIES



When the operator places the bottle in the inspection cavity, its presence is automatically detected and the analysis is performed in ~ 5 seconds.

The fields generated in the inspection cavity are weak in intensity and non-ionizing, therefore completely safe for the liquids and for the operator.

The fields interact with containers and with their content. The entire volume is analyzed in order to verify its conformity with allowed liquids. After a few seconds, the unit provides an **OK** or **Alarm message** without requiring any data interpretation by the operator.

Calibration is carried out automatically by the unit.

3a

*If the container content is identified as acceptable, the **OK message** and a green light are displayed. A short "double beep" is emitted by the internal speaker.*

3b

*If the container content is not acceptable, a YELLOW or RED light and an **ALARM message** ("**Not allowed product**") are displayed. A series of prolonged "beeps" is emitted by the internal speaker.*

SPECIFICATIONS

KEY FEATURES	Integrated Type B and Type A Standard 3 certified System	
	Automatic inspection of any type of containers	
	Minimum installation space	
	Minimum operator training required	
	All solid state	No mechanical parts in movements
		No-ionizing or laser sources
MULTIPLE SENSING TECHNOLOGY	Wideband Radio Frequency (R.F.) - Infrared (IR)	
	Magnetic Inductive - Gravimetric	
INSPECTION CHARACTERISTICS	Commercial Bottles of any shape and materials including plastic, glass and metal	
	Type A sample cups volume: 10 ml	
	Initial Start-up time: 15 sec. max	
	Analysis type: automatic	
	Analysis time: 5 sec. typical (type B) and 4 sec. typical (type A)	
DETECTABLE SUBSTANCES	Explosive precursors and explosive liquids	

ALARM SIGNALING	**LIGHT COLOR**	**DISPLAY MESSAGE**	**MEANING**
	GREEN	OK	Allowed liquid
	YELLOW	Not allowed product	Alarm of medium intensity
	RED	Not allowed product	Alarm of high intensity

ACOUSTIC ALARM		
THREAT CLASSIFICATION AVAILABLE		
OPERATOR INTERFACE	Easy to read high-contrast graphic display	
	High durability stainless steel function keys	
	Programmability of all the parameters protected by passwords	
FUNCTION AND CALIBRATION CONTROL	Automatic calibration, continuously running	
	Manual verification of calibration, performed by the operator through Pass/No-Pass reference test pieces (according to the operational procedures)	
COMMUNICATION CAPABILITY	RS-232 serial interface	
	Ethernet network interface	
REMOTE CONTROL AND ETHERNET NETWORKING FUNCTIONS	Available through the CEIA NetID Management software	Programming
		Statistical Data Collection
		Maintenance
		Firmware upgrade
DEGREE OF PROTECTION: IP 20 (IEC 60529)		
WEIGHT	37.5 lb (type B only) - 38.6 lb (type B and type A)	
DIMENSIONS (WxDxH)	18.5" x 12.5" x 13" (type B only)	
	21.5" x 12.5" x 13" (type B and type A)	
POWER SUPPLY	115/230V~ ±15%, 50/60 Hz ±10%, 15W	

MAIN ELECTRONICS FEATURES	High integration SMT
	32-bit flash-based microcontrollers
	32-bit DSP
	Low power and high reliability
	Very low power inspection field, confined in the analysis compartment, completely safe for both the operator and the liquid
	No ionizing radiation or radioactive sources
	No laser sources
MAIN MECHANICAL FEATURES	Constructed entirely in AISI304 Stainless Steel
	Anti-fingerprint surface treatment
	Rugged and Durable
	Compact and Aesthetically pleasing
INSTALLATION AND MAINTENANCE	Automatic adjustment to environmental conditions
	No initial or periodic calibrations required
	Firmware upgradeable via RS232 or Ethernet interface
	No periodical maintenance or consumables required
	Built-in automatic calibration and self-diagnosis system
CONFORMITY	Conforms to the currently applicable International Standards for Electrical Safety and EMC
ENVIRONMENTAL CONDITIONS	Operating temperature: 32°F to +104°F (0°C to +40°C)
	Storage temperature: 14°F to +140°F (-10°C to +60°C)
	Operating Relative humidity: 0 to 95% (without condensation)
	Storage Relative humidity: 0-98%, without condensation
NATO STOCK NUMBER	6665-151805235 - 6665-151805236

ACCESSORIES / OPTIONS

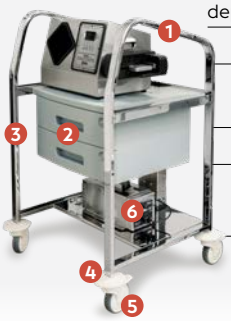
TYPE A ANALYZER

EMA is designed for the analysis of LAGs in their original container. In case of open containers such as cups and thermos flasks, it is possible to carry out the analysis by means of an optional type A analyzer, using small disposable plastic sample cups.
The external probe is installed on the right side of the device. Analysis time: 4 sec.

EMA MOBILE STATION (P/N 110455)

Robust Stainless-Steel Cart, specially designed for optimal use of EMA.

Wheels and locking brakes allow comfortable mobile deployment.



Dimensions (WxDxH): 32" x 28" x 46"

1. Transport handles
2. Lockable drawers
3. AISI 304 frame
4. Frame protection
5. Floating wheels + brake (4)
6. MBSU-2: Independent, compact size, long life power supply with embedded fast charger (optional)