SMD600 Plus

VERY HIGH PERFORMANCE ENHANCED METAL DETECTOR

NIJ-0601.02 Compliant

STAC Certified

TWO-IN-ONE METAL DETECTOR

■ **HIGH SENSITIVITY**
Fully compliant with the NIJ-0601.02 Law Enforcement Standard

■ **HIGH DISCRIMINATION**
Compliant with and Certified to the strictest Standards for Airport security screening

FEATURES

■ Accurate Pinpointing of individual and multiple metal targets

■ Exceptional Immunity to external interferences

■ Unmatched Reliability

■ Rapid Installation

Applications

☑ Correctional Facilities
☑ Law Enforcement
☑ Government Buildings
☑ Airports
☑ Industries (Security)
☑ Nuclear Facilities (Security)
☑ Hospitals (MRI)
☑ Data Processing Centers

CEIA®

EMD+

CEIA s.p.A. An **ISO 9001 Company** CERTIFIED

45+ years of experience

www.ceia.net

Threat Detection through Electromagnetics

The SMD600 Plus is the first Metal Detector in the market fully compliant with the NIJ-0601.02 Standard, as required in **very high sensitivity** applications, which also allows **very high throughput** in high security public screening checkpoints
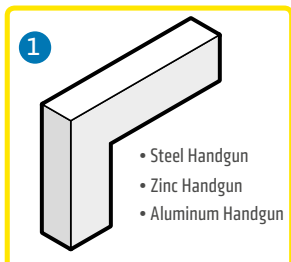
Fully compliant with the NIJ-0601.02 Standard

■ The Standard establishes the requirements of Sensitivity, Discrimination and Immunity for Law Enforcement and Correctional Facilities. The Standard defines 3 levels of security:
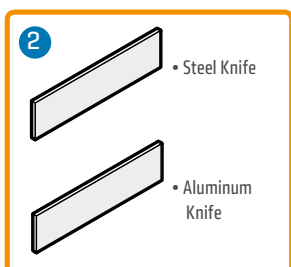
1. LO Level (Large Object Size)
2. MO Level (Medium Object Size)
3. SO Level (Small Object Size)

The SMD600 Plus Metal Detector fully complies with the requirements of the NIJ0601.02 Standard for all Security Levels, and can therefore be applied in situations from the inspection of visitors to that of inmates in top-security checkpoints, even in areas with strong electrical and mechanical interferences.
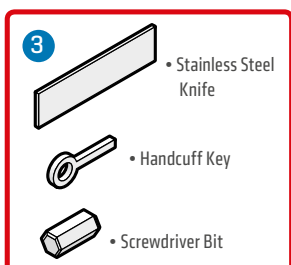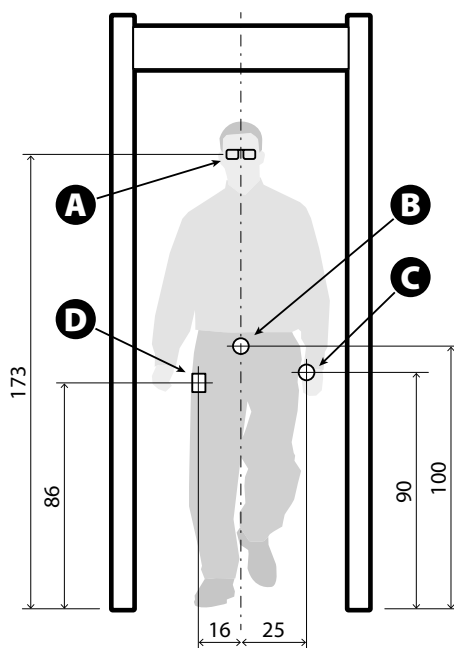
3 levels of security

1
• Steel Handgun
• Zinc Handgun
• Aluminum Handgun

LARGE OBJECT SIZE (HANDGUNS)

2
• Steel Knife
• Aluminum Knife

MEDIUM OBJECT SIZE (KNIVES)

3
• Stainless Steel Knife
• Handcuff Key
• Screwdriver Bit

SMALL OBJECT SIZE
(SMALL HARD-TO-FIND ITEMS)

Innocuous Items

A
B
C
D

173
86
16   25
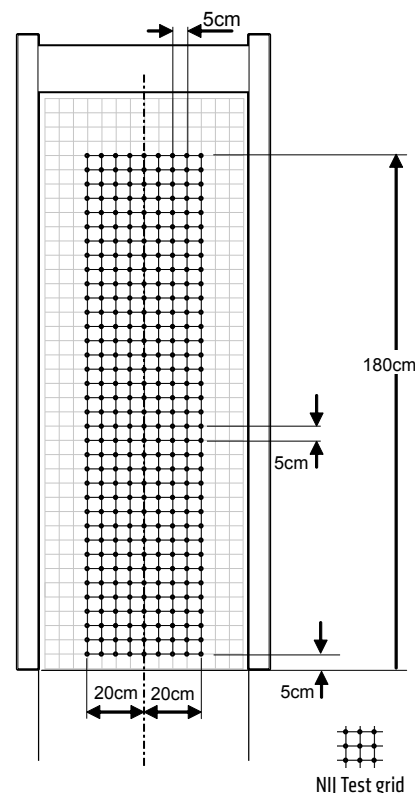90   100

DISCRIMINATION TEST

Clean tester shall carry the innocuous items specified, performing the specified number of transits, walking at normal speed (0,5...1,5 m/s). Ensure that the Metal Detector will trigger less than the indicated number of alarms:

LO   25 transits with A + B + C + D (max 5 alarms)
MO   25 transits with A + B (max 5 alarms)
SO   8 transits with no items (no alarms allowed)

A Eyeglasses   C Watch
B Belt buckle   D Set of coins

Test Positions

5cm
180cm
5cm
5cm
20cm   20cm

NIJ Test grid

DETECTION TEST OBJECT TRANSITS

Perform, for each Test Object, two passages, one forward and the other backwards, for each position and for each orientation, verifying that for every transit an alarm is triggered.

Two-in-One Enhanced Metal Detector: the SMD600 Plus is a very high sensitivity Metal Detector that also offers characteristics of high discrimination and high detection uniformity

VERY HIGH SENSITIVITY

HIGH RESOLUTION AND PRECISION

- Quick, accurate analysis of all parts of the body of people in transit, from the shoe level to the crossbar
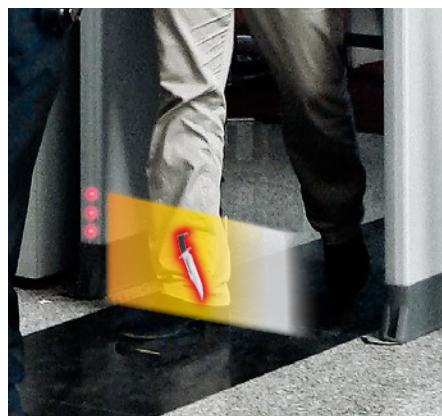
- Very accurate pinpointing of individual and multiple metal targets

A full-height light bar displays the location of the detected metal masses in transit. This results in rapid identification of threats and a reduction or elimination of the need for manual searches.

- Built-in programs to screen visitors and staff for weapons and contraband

Very High Throughput

UNMATCHED DISCRIMINATION

- Cutting-edge discrimination technology allows personal effects to be ignored, creating rapid transit flow

The transit volume magnetic scanning system, invented by CEIA and applied since production of the first zonal Metal Detectors in 1986, allows state-of-the-art detection and discrimination results. The SMD600 Plus has an extremely low nuisance alarm rate even at the strictest Security Levels requested today, and therefore allows high transit flow rates and the minimum need for intervention by inspection personnel.

ALARM

NO ALARM

Unique Alarm Signaling

- 4 Multi-Zone Display Bars, each programmable as entry Stop/Go and/or local alarm indication

  Accurate signaling is essential for best operation and flow management. The SMD600 Plus provides the user with fully-programmable signaling. Both entry-points can indicate with a high level of accuracy, even simultaneously, the areas of transit of the threats detected, and can also be configured as 'traffic lights' to control transits through the detector.

- Flexible Acoustic Alarm Signaling System:

  ☑ 10 Continuous and Pulsed Tones   ☑ 34 Special Sounds

- 10 Acoustic Intensity Levels

  A complete acoustic alarm system allows personalization of the alarm tones and intensities, with a wide choice of continuous, pulsed and special tones at different levels of intensity. The wide volume control dynamic allows operation even in very noisy environments.

High Precision Transit Counter

The Metal Detector provides an automatic count of the people passing through the access point in both directions and the related nuisance alarm percentage.

☑ In-Bound Transits
☑ Out-Bound Transits
☑ Alarm Rate
☑ Automatic Compensation for repeated transits of the same person

4-beam very high precision transit counter is also available for enhanced performances (option)

Most Powerful and Versatile Security Features

- Up to 50 built-in Security Programs

  ☑ Up to 30 International Standards   ☑ Up to 20 Customizable Levels

  Setting the Security Levels could not be easier and more versatile than in the SMD600 Plus. Users can choose directly from the known International Standards or request implementation of a Standard personalized to their own requirements. Users can also create their own work program and save it in internal memory provided for the purpose.

- Chip Card system for fast, simple and secure parameter changes (i.e. alarm volume and tone, counter reading, etc...) and security level selection

- Any security standard can be enhanced with selectable random alarm probability

CHIP CARD SYSTEM

Chip Card for automatic selection of Security Levels and parameter changes.

Communication Capabilities

NETWORK CONNECTION   INFRARED REMOTE CONTROL   BLUETOOTH

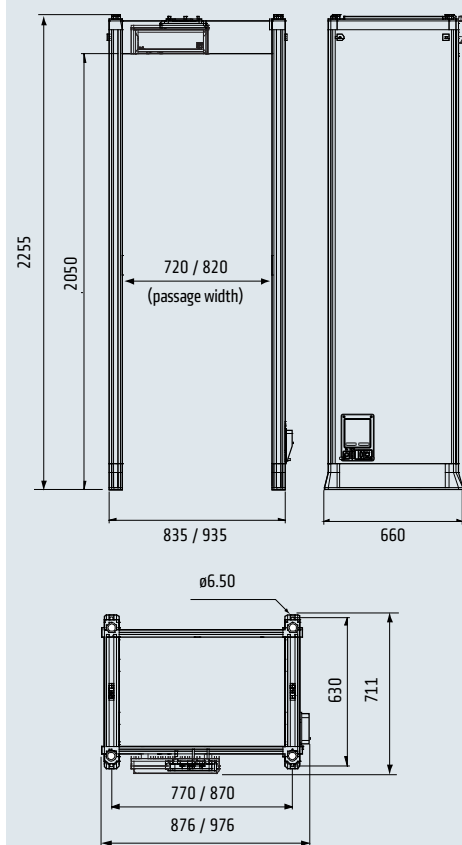| TYPE OF OPERATION	Ethernet	USB	Infrared	Bluetooth	RS-232
Maintenance	○	○		■	■
Remote Control	○		■	■	■
Remote Data collection	○				

■ STANDARD   ○ OPTION

Model Configuration

Features	SMD600 Plus/PZ
Fully compliant with, and exceeding, the NIJ-0601.02 Standard	■
Very high throughput in high security public screening checkpoints	■
4 display bars each programmable as zone indicators and/or pacing lights	■
Dual Side 20 x 2 localization zones	■
High precision transit counter (2-beam)	■
Chip Card Reader	■
Bluetooth, infrared and RS-232 communication	■
Programmable Random Alarm capability	■
3-Level Password and hardware key access protection	■
Met-Identity technology (separate Ferrous and Non-Ferrous alarm signaling)	■
One Touch Automatic Self Installation (OTS)	■
Automatic Operational Functional Verification (OFV)	■
Automatic Vibration Compensation (AVS, EVA)	■
Automatic Channel Search (CS)	■
Automatic Floor Gain Adjustment (FGA)	■
Automatic Technical Functional Verification (TFV)	■
Automatic Environmental Noise Compensation (ENA)	■
Powered by safe low voltage DC	■
Anti-tamper on/off switch	■
Integrated web-server & logger (includes Ethernet and USB interface)	○
Weather resistant protection	○
Anti-vandalism, anti-tampering protection	○
IP65 protection (includes weather resistant and anti-vandalism options)	○
Embedded battery charger and under-voltage protection	○
Long life crossbar battery back-up	○
820 mm useful passage width	○
Very High precision transit counter (4-beam)	○

■ STANDARD   ○ OPTION

Dimensions (mm)

2255
2050
720 / 820 (passage width)
835 / 935
660
ø6.50
630
711
770 / 870
876 / 976

UNDER THE ALARM THRESHOLD

Small metal mass
Medium metal mass

OVER THE ALARM THRESHOLD

Medium metal mass
Large metal mass

Green and Red Metering Signals Proportional to the Metal Mass Detected

Options / Upgrade Kits

➤ Weather Resistant Protection

Kit for upgrading the standard version to outdoor applications according to IEC 60950-22; this kit includes shelters, crossbars, protection covers for power supply and IP67 mains power supply adapter.
- 720 mm passage width (part # 55630)
- 820 mm passage width (part # 55633)

➤ Anti-vandalism, Anti-tampering Protection

This option includes stainless steel control unit, IP67 mains power supply adapter, protection covers for power supply and antenna connection compartments, equipped with screws requiring tools for removal. Part # 55629

➤ IP65 Protection

This option includes the Weather Resistant and Anti-vandalism kits.
- 720 mm passage width (part # 55631);
- 820 mm passage width (part # 55632)

➤ 820 mm Useful Passage Width

Part # 55635

➤ Long life crossbar battery back-up

Crossbar battery back-up in stainless steel case. Provides up to 8 hours of autonomous working time.
Part # 55681

➤ Embedded Battery Charger and Under-voltage Protection

Anti-tamper on/off switch, RS-232 interface, battery charger with 12 hours mains disconnection diagnostic alarm.
Part # APSM2Plus/P

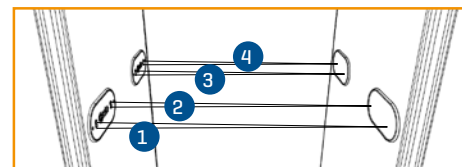## ➤ Integrated Web-server & Logger, Battery Back-up and Charger

Anti-tamper on/off switch, RS-232, USB, 10/100 baseT Ethernet interface, data logger, real-time clock, integrated web-server, transit statistical data analysis, 20' internal battery back-up with 12 hours mains disconnection diagnostic alarm.
Part # APSiM2Plus/P

➤ Very High Precision Transit Counter

Four photocells fitted into the archway allow counting of transits, alarms and percentage of alarms. The 4-beam version further increases accuracy in counting and determination of transit direction, even in intense transit conditions. Part # 46112

Accessories

➤ **Chip Cards**

Chip cards for simple and secure selection of Security Levels and parameter setting. List of chip-cards available on request.

➤ **RCU2**

Control unit for full remote access,including alarm signalling and programming of CEIA Metal Detectors.
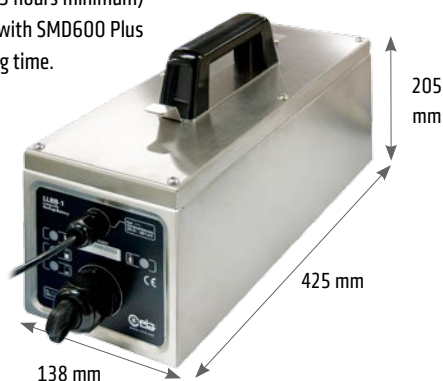Part # RCU2

➤ **MBSU-2**

Independent, compact size, long life power supply in weatherproof stainless steel case, with embedded fast charger:

• 25.5 hours typical (17.5 hours minimum) continuous operation with SMD600 Plus
• 5 hours typical charging time.

Part # MBSU-2

205 mm

425 mm

138 mm

➤ **MD-Scope**

Powerful, PC based installation and service Software. Includes oscilloscope and terminal functionality.

Part # MD-SCOPE2

➤ **Metal Detector Divesting Table**

FOR MANAGEMENT OF PERSONAL METAL BELONGINGS

• Standard length: 610 mm (Part # 18074)
• Extended length: 1200 mm (Part # 39491)

➤ **IRC-1**

Infrared Remote Controller for wireless remote programming of the control unit.
Part # 47180

➤ **Reference Test Samples**

CEIA provides certified Test Samples reproducing for shape, material and signal on WTMDs the same effect of the reference targets

• Part # NIJ-0601.02-SKN: complete test samples kit for NIJ-0601.02 detection and discrimination compliance verification.
• Part # NIJ0601.02SO/MO-SK : test samples kit for NIJ-0601.02 MO and SO classes detection capability verification.
• Part # EMD-SK-GDM-FV: reference samples for accurate verification of the disassembled guns Security Level.

➤ **Upper Connection Module**

This extension cable allows the connection of power supply and serial communication to personal computers or CEIA accessories, such as RCU-2.
Part # 46650

➤ **RRU**

Remote relay unit (RRU) to repeat the detection alarms of the gate through a relay contact. The RRU module can be used for integration of the Metal Detector in interlocked door systems.
Part # RRU

➤ **Waterproof Mains Power Supply**

100W IP67 power supply for outdoor applications. It is provided with flanges for simple installation.
Part # 43564

CEIA SMD600 Plus
Very High Performance Enhanced Metal Detector

Specifications

KEY FEATURES	Very High Sensitivity	Automatic Technical Functional Verification (TFV)
	Very High Discrimination	Automatic Environmental Noise Compensation (ENA)
	Fully compliant with, and exceeding, the NIJ-0601.02 Standard	Met-Identity technology identifies and signals the metal type in real time
	Very high throughput in high security public screening checkpoints	Random alarm capability programmable from 0% to 100%
	20 x4 high precision localization zone x display bars	Exceptional Immunity to external interferences
	One Touch Automatic Self Installation (OTS)	High precision bidirectional counter with automatic rescreening compensation
	Automatic Operational Functional Verification (OFV)	Chip Card capability for fast, simple, and secure programming
	Automatic Vibration Compensation (AVS,EVA)	Powered by safe low voltage DC
	Automatic Channel Search (CS)	Standard Interfaces: RS-232, Bluetooth, Infrared
	Automatic Floor Gain Adjustment (FGA)	Other available interfaces: Wi-Fi, Ethernet, USB
QUALITY	Continuous self diagnostic system	
	Proven reliability	
	No periodic re-calibration and preventive maintenance required	
	No scheduled maintenance	
	Fully digital design	
WALK-THROUGH GATE STRUCTURE	State-of-the-art, robust and washable panels	
	Protected against aging, weather and wear	
CENTRAL CONTROL UNIT	Ergonomic and robust design	
	High visibility alphanumeric display and programming keyboard	
	Made of advanced plastics or stainless steel and anti-vandalism construction (option)	
	Access to the front panel protected by hardware key and 3 levels of passwords	
ALARM SIGNALING	VISUAL SIGNALS	Multi-zone display bar for "height on person" localization
		4 light bars with selectable entry/exit and pacing indication
		Green and red metering signals proportional to the mass of the detected target
	AUDIO SIGNALS	10 selectable continuous and pulsed tone plus 34 special tones
		10 selectable sound intensities ranging from 0 to 90 dbA at 1m
TYPE OF SIGNALING	VISUAL	Fixed or proportional to the mass in transit - visible from 6m under lighting of 4000lux
	VISUAL ZONE INDICATION	20 x4 distinct zones (20x2 entry side and 20x2 exit side)
PROGRAMMING	Up to 50 built-in security programs (up to 30 International Standards, up to 20 Customizable Levels)	
	Remote via RS-232, Infrared Remote Control Unit, Bluetooth™ or Ethernet 10/100 base T (option) interface	
	SECURITY LEVEL	International Standard (IS) command
		Chip card
	Local by Control Unit alphanumeric display and keyboard	
	Programming and chip-card access protected by user and super-user passwords	
OPERATIONAL FEATURES	Quick reset time as short as 0.2 seconds for high throughput rate	
	Very high detection speed (up to 15 m/sec.)	
	Built-in operational and technical functional verification	
	One-touch key reading of inbound, outbound and Security Level Data	
INSTALLATION DATA	Automatic synchronisation between two or more metal detectors with distance as close as 30 cm without the use of external cables	
	Built-in floor sensitivity adjustment function	
	Automatic Installation function (OTS)	

Environmental Data

- POWER SUPPLY : 100...240V~ -10/+15%, 47...63Hz, 40 VA max
- OPERATING TEMPERATURE: -20°C to +70°C (-37°C to +70°C upon request)
- STORAGE TEMPERATURE: -37°C to +70°C
- RELATIVE HUMIDITY: 0 to 95% (without condensation)

Certification and Compliance

- Complies with the applicable Standards for Law Enforcement and Correctional Facilities
- Fully compliant with the NIJ-0601.02 Standard requirements
- Compliant with and certified to the applicable Standards for Enhanced Metal Detectors (EMD)
- Compliant with the applicable electromagnetic Standards on Human Exposure and Pacemaker Safety
- Compliant with applicable International Standards for electrical safety and EMC
- Harmless to magnetic media (CD, tapes, etc.)

Comprehensive support

CEIA PROVIDES FULL OPERATIONAL AND TECHNICAL TRAINING SUPPORT BY CERTIFIED PERSONNEL EITHER AT CEIA FACILITY OR AT CUSTOMER PREMISES

- phone technical support
- in-house and on-site repair/services
- standard and custom training

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