02PN20

RADIATION AND METAL DETECTION SYSTEM

RADIATION DETECTOR

- Detection of radioactive materials
- Embedded, high-sensitivity, full-height radiation sensors
- ANSI and IEC standards compliant
- Options include:
  - Isotope identification with NaI detectors
  - Fixed, indoor use or portal outdoor use (IP65 compliant) configurations
  - CEIA NetID Anywhere network system for instant remote access or monitoring

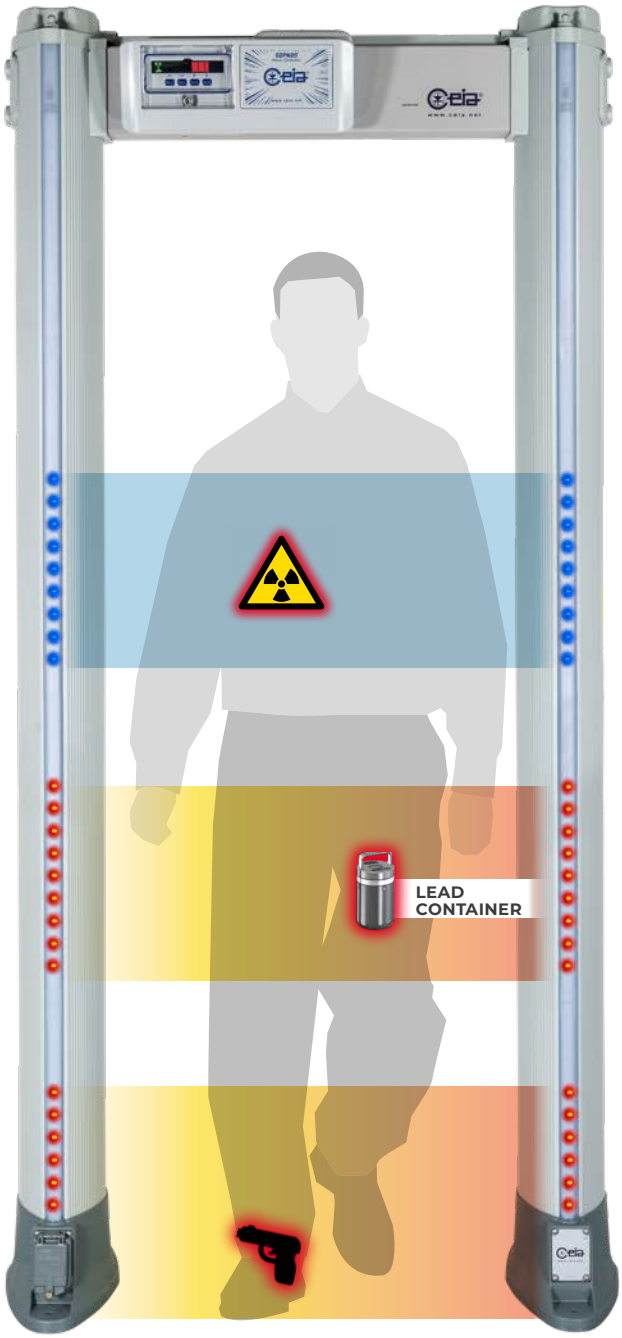
METAL DETECTOR

- Simultaneous detection of all-metal weapons, including magnetic, non-magnetic and mixed alloy and light alloys threats
- High-Throughput
- Detection of radiation shielding containers (Lead) containing radiological sources

DUAL THREAT DETECTION IN A SINGLE GATE

The ***02PN20***, as an option, can be equipped or field upgraded after the installation **with a high sensitivity array of radiation detection sensors**.

This array covers the full height of the transit, allowing accurate detection of radioactive substances carried by people in transit. Available in **Panel** and **Elliptic column versions**.



02PN20 ELLIPTIC COLUMN VERSION

ENHANCED WALK-THROUGH METAL AND RADIATION DETECTOR

The 02PN20 is a Walk-Through Weapons and Radiation Detector that combines two advanced detection technologies in a single lightweight Portal.

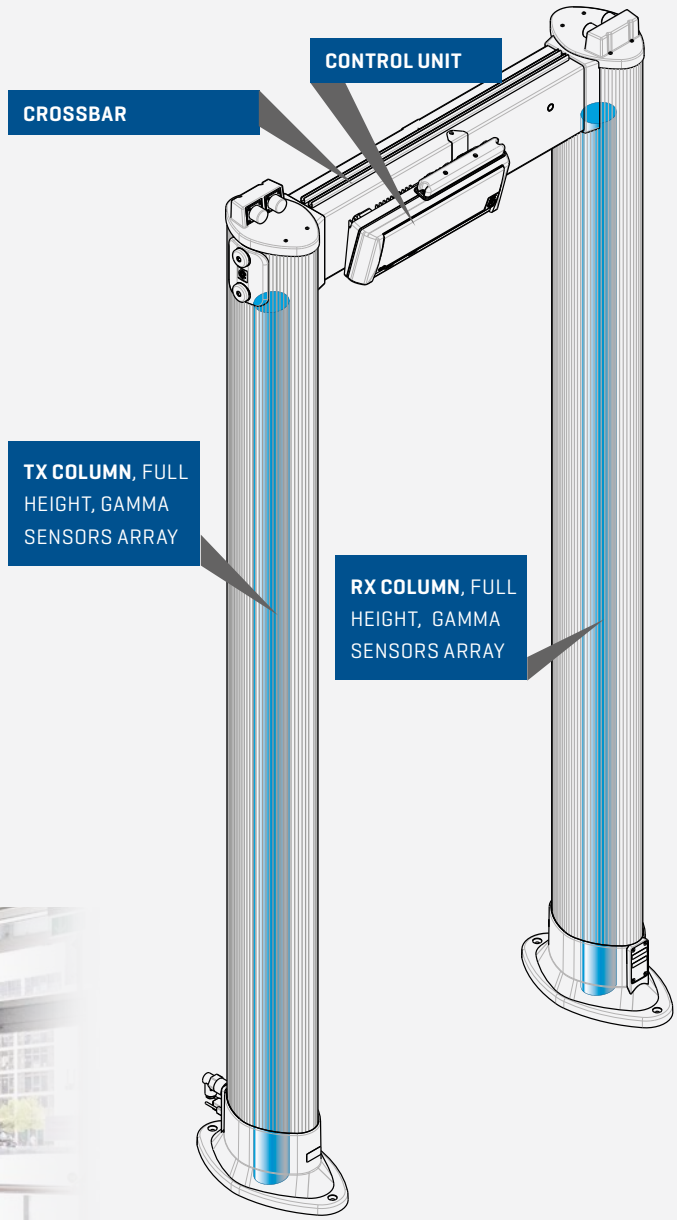
TWO ADVANCED DETECTION TECHNOLOGIES

Metal weapons such as miniaturized assembled and disassembled firearms, in magnetic and/or non-magnetic metal, are detected independent of their orientation and position of transit, thanks to an extremely uniform inspection field.

At the same time, innocuous items, such as keys, coins, shoe shanks and belt buckles, are effectively discriminated thus reducing the nuisance alarm rate five or more times compared with other available metal detection systems.

The *02PN20* is also equipped with an array of sensitive gamma sensors, covering the full height of transit, allowing accurate detection of radioactive substances carried by the people in transit. The detection capability includes a wide range of energies for a complete coverage of the possible radioisotopes.

The gamma detectors adapt themselves to the background radiation level, adjusting the threshold to the optimum value for the installation environment. At the same time, a special algorithm prevents the adaptation to unusual background levels and changes.



The arrays of gamma sensors covers the full height of the transit, allowing accurate and sensitive detection of radioactive substances carried by people in transit.

COMPLIANCE

The radiation detection technology utilized in the 02PN20 has been tested in Government-Authorized Laboratories.

PREVENTION OF RADIOACTIVE SUBSTANCE SHIELDING

Any attempt to smuggle radioactive substances using masking containers is effectively prevented by a specific detection function. Two advanced detection technologies are therefore combined in order to enhance each single capability.

HIGH LEVEL OF RELIABILITY

The overall system is characterized by sturdy, reliable electronic and mechanical construction, ease of installation, automatic reset calibration and very high immunity to external electrical and mechanical interference.

The *02PN20* refined, elegant design can be used in the most demanding architectural environments. The unique patented design of the gate is compact and easy to install while utilizing minimal amounts of space. The lightweight design of the gate is perfectly suited for portable applications.


PTB
Physikalisch-Technische Bundesanstalt
Braunschweig und Berlin

Bericht
Report

Gegenstand: Durchgangs-Metall- und Gamma-Detektor (Portal-Monitor in Paneelerform)

Hersteller: Costruzioni Elettroniche Industriali Automatismi C.E.I.A. S.p.A., Zona Ind. Vicomaggio 54/56 52040 Arezzo, Italy

Typ: 02PN20-G

Kenn-Nummer: 207 06005232

Auftraggeber: Costruzioni Elettroniche Industriali Automatismi C.E.I.A. S.p.A. Zona Ind. Vicomaggio, 54/56 52040 Arezzo Italy

Anzahl der Seiten: 7

Geschäftszeichen: PTB-6.11-241/10.2007_B

Datum der Untersuchung: 5. Februar 2007 bis 8. Februar 2007

Im Auftrag

Dr. Karsten Kossert

Braunschweig, den 12.03.2007

Siegel

Bearbeiter:

Dr. Ole Nähle

Checkpoint Security coverage using the 02PN20 can be completed by a G-SCAN Radiation Detector positioned at the exit of the carry-on baggage inspection X-Ray machine.

ALARM SIGNALLING

The 02PN20 is an integrated Metal and Gamma Detector Portal, designed to detect metal and radioactive threats simultaneously.

ALARM SIGNALLING

Metal weapons, radiation sources and shielding containers are indicated on the bar display with appropriate optical signals. **Threat transit zones are indicated by means of 20 independent optical indicators**.

All detection data and programming operations are available through the Network monitoring software (see current NetID literature).

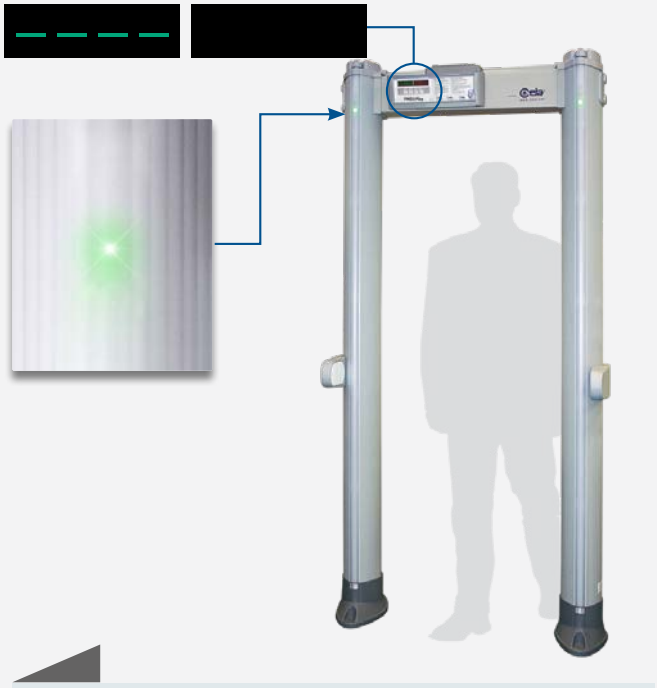
TWO DIFFERENT ALARM SIGNALING MODES can be set, according to the preferred operating procedures:

- **METAL WEAPONS**: acoustic alarm, position indication by red color zone and bar-graph intensity on the control unit.
- **RADIOACTIVE SOURCES**: dedicated acoustic alarm, position indication by blue color zone and bar-graph intensity on the control unit.

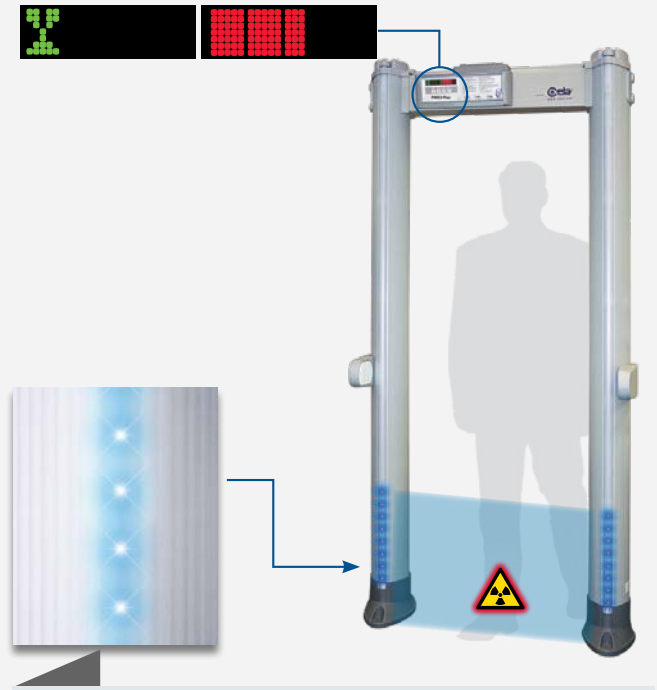
  Detection of metal threats and radioactive sources carried by the same transiting person are displayed simultaneously.

- **METAL WEAPONS**: acoustic alarm, position indication by red color zone and bar-graph intensity on the control unit.
- **RADIOACTIVE SOURCES:** intensity and position remotely alarmed through network monitoring software to a supervisor station.

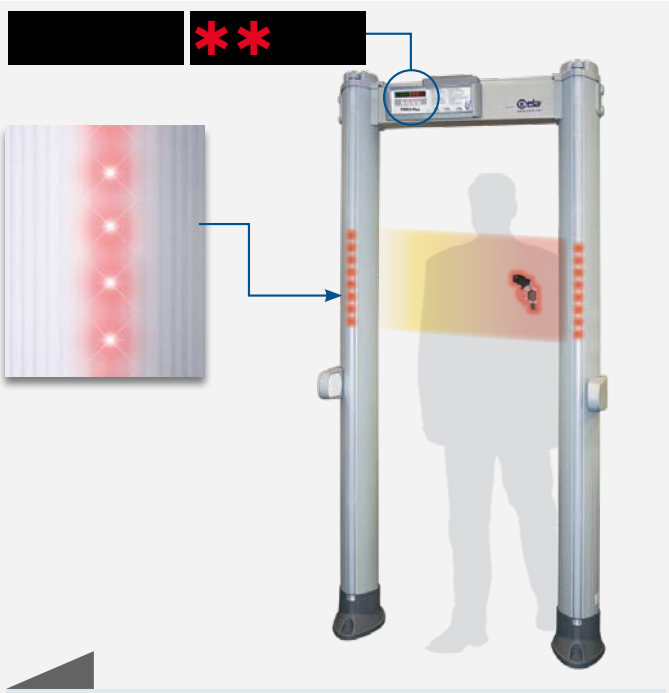
  In remote-operation mode, local display of alarms caused by radioactive substances can be deactivated.



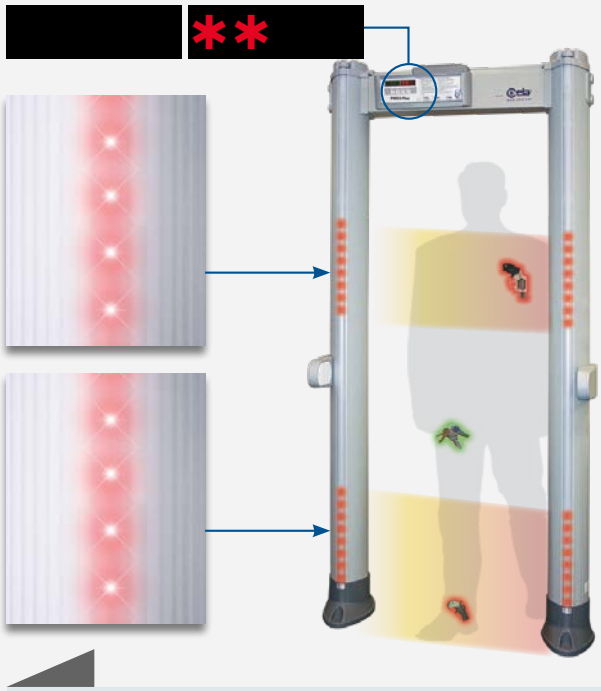
SYSTEM READY AND WAITING FOR TRANSITS



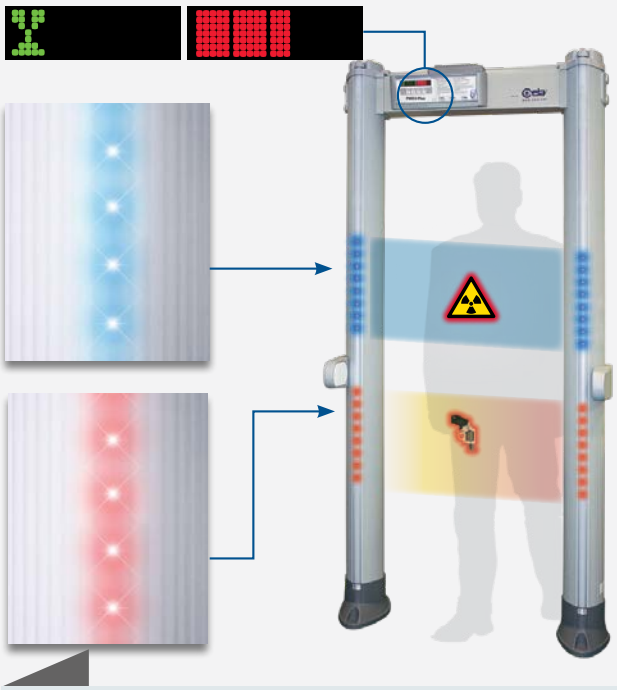
RADIOACTIVE SUBSTANCE DETECTION **(LOCAL MODE)**



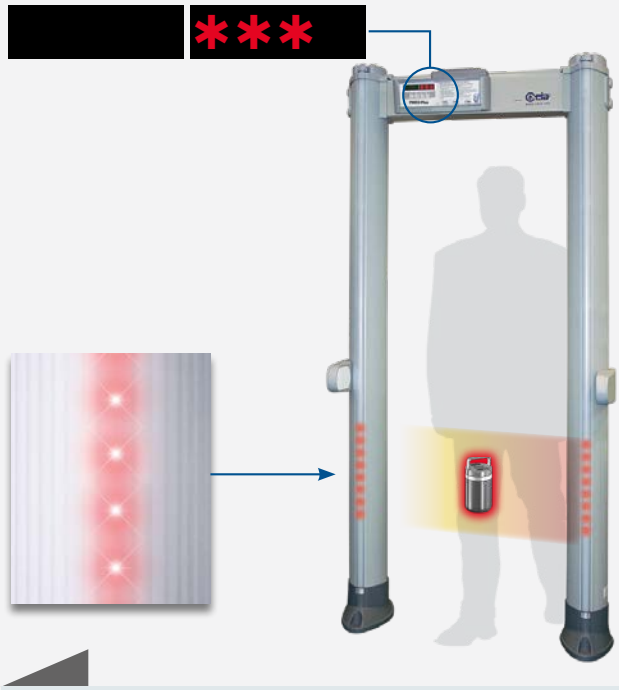
SINGLE METAL THREAT DETECTION AND INDICATION



MULTIPLE METAL THREATS DETECTION AND DISCRIMINATION



SIMULTANEOUS DETECTION OF A METAL THREAT AND A RADIOACTIVE SUBSTANCE (**LOCAL MODE**)



SHIELDING CONTAINER DETECTION

Extended communication capabilities including data networking for alarm and status supervision through wireless TCP/IP.

*The **02PN20** can be fitted with the **APSiM3 Plus** Wireless Network Module.*

EXTENDED COMMUNICATION CAPABILITIES

The ***APSiM3 Plus*** integrates a secure web server and WiFi infrastructure using state of the art SSL and WPA2 security protocols. The *APSIM3 Plus* can act both as a WiFi client and WiFi access point allowing to set up a local secure wireless network without requiring additional devices. The wireless network covers a 328 ft wide area on open site conditions.

Any authorized device capable of wireless connectivity and https browsing (such as tablet pc, smart phones and laptops) can access the following functionalities:

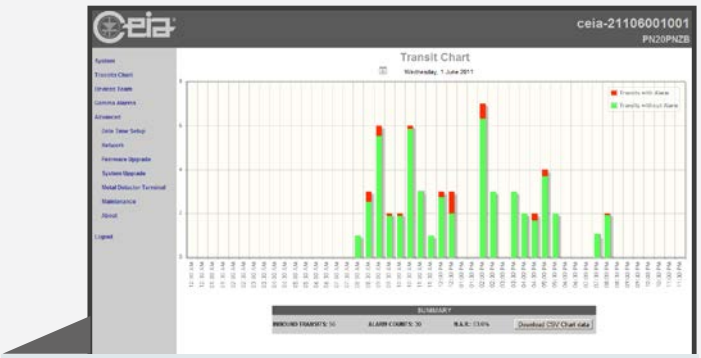
- Automatic monitoring of the auto-diagnostics, battery level and security level of the installed *02PN20* group.
- Visual representation of the transits flow through the *02PN20*. The transits data is stored in the APSiM3 Plus for up one year and can be downloaded through date selection.

TYPE OF OPERATION	Ethernet	Wi-Fi	Infrared	Bluetooth
Maintenance	○	○		•
Remote Control	○	○	•	•
Remote Data collection	○	○		

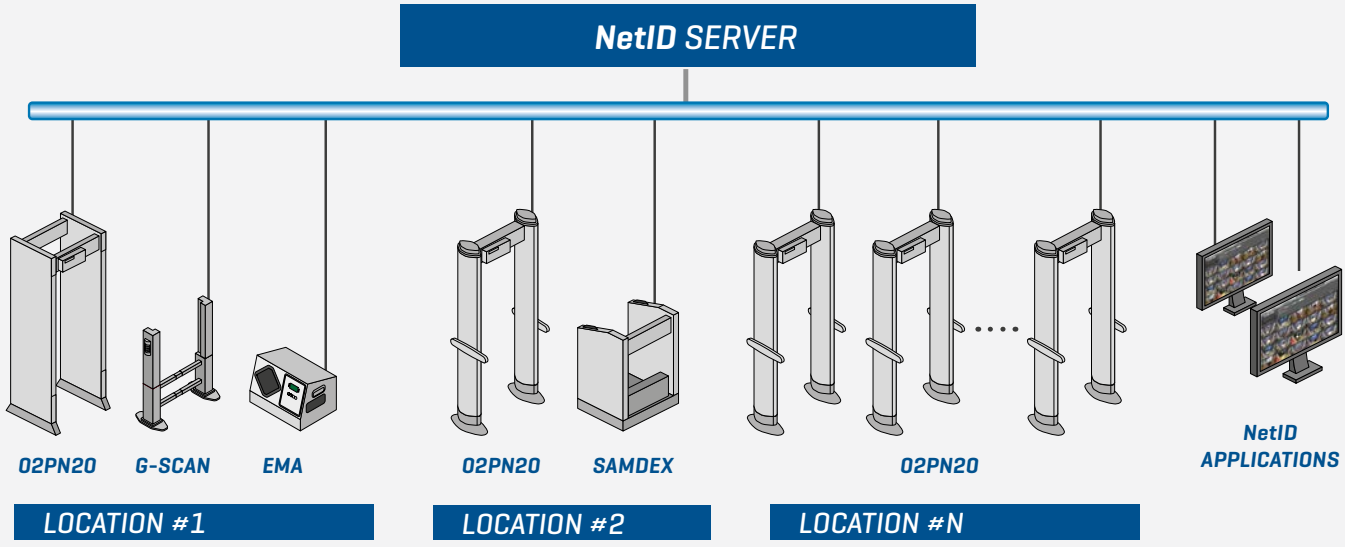
STANDARD • OPTION ○

APSiM3 Plus INTEGRATED WEB-SERVER & LOGGER (OPTION)

- Monitor the status of Metal Detector network in real time
- Remotely control and verify the security level
- Report on number of people screened and alarm rates automatically
- No server or specialized client software required, only a web browser
- Zero configuration network for simple setup
- 2 x Ethernet 100base-TX • Wi-Fi - 802.11 b/g



Visual representation of the transits flow through the 02PN20.

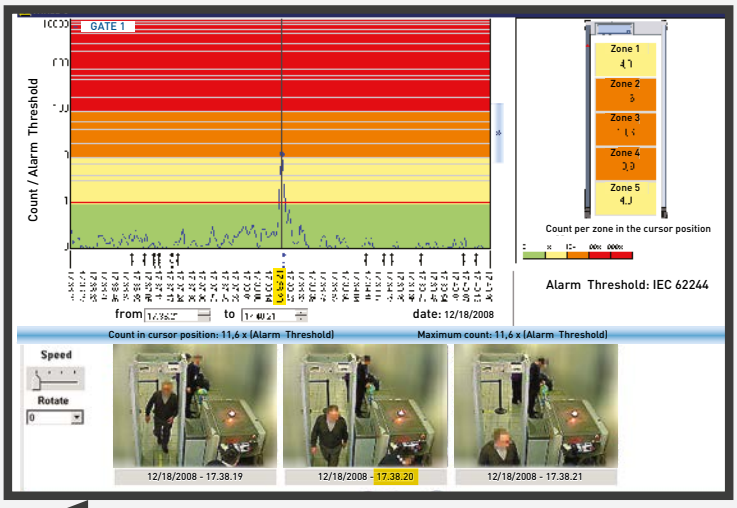


*The **NetID Network Management System** has been supervisioning CEIA IP enabled Metal Detectors since the year 2001. Today 150 instances of NetID Systems are in active use worldwide managing more 250 different sites.*

*INTEGRATED CAMERA SYSTEM WITH MDAR SOFTWARE**

- Centralized Monitoring of the functionality of each Metal Detector
- Centralized Setting of the Metal Detectors working parameters
- Transits flow monitoring
- Detailed reporting of the transits data and the security device configuration data
- Data collection from each Metal Detector detailing the information on every single transit

* *This option requires the installation of the APSiM3 Plus integrated web-server & logger*



Detection Spectrum of a radioactive substance.

MONITOR **CONTROL** **REPORT**

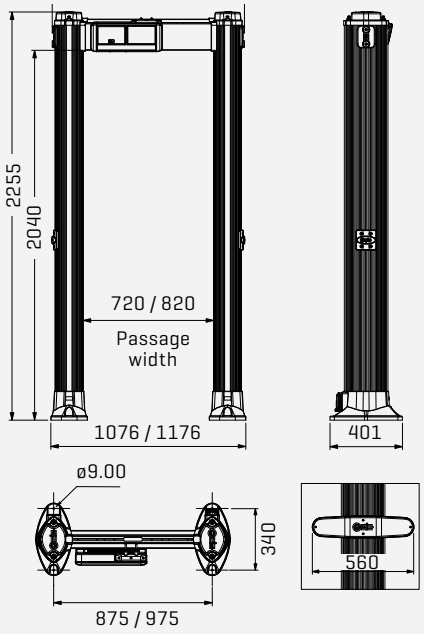
MDAR, video recorder and instant alarm player.

SPECIFICATIONS

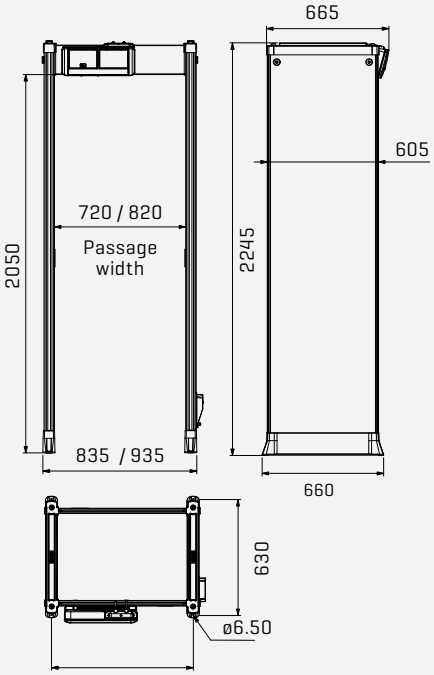
GATE STRUCTURE	State-of-the-art, robust and washable panels or compact elliptical columns
	Protected against aging, weather and wear
OPERATIONAL FEATURES	High discrimination and transit flow rates five or more times greater than other metal detection systems
	Quick reset time as short as 0.2 seconds for high throughput rate
	Very high detection speed (up to 15 m/sec.)
	Built-in operational functional verification
	One-touch key reading of inbound, outbound and Security Level Data
QUALITY	Continuous self diagnostic system
	Proven reliability
	No periodic re-calibration and preventive maintenance required
	No scheduled maintenance
	Fully digital design
ALARM SIGNALLING	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
	10 selectable continuous and pulsed tone plus 34 special tones
	10 selectable sound intensities ranging from 0 to 90 dbA at 1m
TYPE OF SIGNALLING	Fixed or proportional to the mass in transit - visible from 6m under lighting of 4000lux
	60 distinct zones (20 vertical x 3 lateral) entry and exit side
PROGRAMMING	Up to 50 built-in Security Programs
	Remote via 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
ENVIRONMENTAL DATA	Power Supply : 100...277V~ ±10%, 47...63Hz, 40 VA typical consumption
	Operating temperature: -20°C to +65°C (-37°C to +70°C upon request)
	Storage temperature: -37°C to +70°C
	Relative humidity: 0 to 95% (without condensation)
INSTALLATION DATA	Automatic synchronisation between two or more metal detectors with distance of down to 5 cm without the use of external cables
	Automatic Installation function (OTS)
CERTIFICATION AND COMPLIANCE	▪ Compliant with and certified to the applicable Standards for Enhanced Metal Detectors (EMD) ▪ Compliant with and certified to the applicable detection requirements for Gamma Portal Monitors ▪ Compliant with the applicable electromagnetic Standards on Human Exposure and Pacemaker Safety ▪ Compliant with all Airport Security Standards worldwide ▪ Compliant with applicable International Standards for electrical safety and EMC ▪ Approved by Ministries and Competent Governmental Authorities

DIMENSIONS (mm)

ELLIPTIC COLUMN



PANEL



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