POLIMASTER®
Radiation Detection Technologies

RADIATION PORTAL MONITOR

PoliGate™ Pedestrian

PoliGate™ Pedestrian series of Radiation Portal Monitors (RPMs) are high-sensitive fixed systems designed for permanent installation and monitoring of people or packages for the presence of radioactive materials. It is an essential component of any facility that requires strict security measures, including government buildings, research facilities, and nuclear power plants.

The RPM is easy to operate and maintain, requires minimal training, and is supplied with user-friendly software that provides real-time data and alarms. The compact and ergonomic design of the RPM makes it a convenient solution for use in various applications for screening people, luggage and cargo.

Applications
- Customs and border control
- Waste management sites
- Airports and seaports
- Public events security
- Nuclear power plants
- Police and security
- Industrial facilities
- Scrap processing
- Railway stations

Features
- Control zone up to 1.5 m × 2 m (W×H)
- Lead shielding for natural background rejection
- No stop of an object is required for measurement
- Wide gamma energy range from 20 keV to 3 MeV
- Local and remote light and audible alarm annunciators
- Back-up battery providing at least 8 hours of operation
- Presence detection system (occupancy sensors)
- Adjustable sensitivity parameters for specific applications
- Optional video surveillance system

γ n IP65

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SPECIFICATIONS

Model (detected radiation)	Speed, km/h	Control zone W x H, m	Layout of detection units	Minimal detectable amounts of nuclear and radioactive materials*								
				^{241}Am, kBq, (µCi)	^{137}Cs, kBq, (µCi)	^{60}Co, kBq, (µCi)	^{133}Ba, kBq, (µCi)	^{238}U, g	^{235}U, g	^{239}Pu, g	^{239}Pu, g (4 cm Pb)	^{252}Cf, neutron/s
PoliGate™ Pedestrian G1	5	1 × 2	G	400 (11)	80 (2)	40 (1.1)	50 (1.25)	470	30	0.8	-	-
		1.5 × 2		700 (19)	130 (3.5)	70 (1.9)	80 (2.16)	815	50	1.4		
PoliGate™ Pedestrian G2	5	1 × 2	G G	120 (3.2)	22 (0.59)	12 (0.32)	13 (0.36)	140	8.5	0.24	-	-
		1.5 × 2		175 (4.75)	33 (0.88)	17.5 (0.475)	20 (0.54)	205	12.5	0.36		
PoliGate™ Pedestrian GN1	5	1 × 2	GN	750 (20)	120 (3.2)	65 (1.8)	75 (2)	870	47	1.4	110	6500
		1.5 × 2		1290 (35)	210 (5.6)	110 (3)	130 (3.5)	1500	80	2.3	190	11250
PoliGate™ Pedestrian GN2	5	1 × 2	GN GN	200 (5.5)	32 (0.87)	18 (0.47)	20 (0.55)	250	13.4	0.4	42	2500
		1.5 × 2		320 (8.7)	48 (1.3)	26 (0.71)	30 (0.8)	380	20	0.6	62	3700

*If gamma radiation background is < 0.1 µSv/h, false alarm rate is < 1/1000 passages

Detectors	Gamma: plastic scintillators (PVT), 11 l (gamma-only detection units), 6.6 l (gamma-neutron detection units) Neutron: 10B/ZnS(Ag)
Energy range	20 keV to 3 MeV
False alarm rate	< 1/1000 passages
Communication	Ethernet
Ingress protection	IP65
Weight (detection block)	120 kg (gamma detection block) 130 kg (gamma-neutron detection block)
Dimension (RPM)	2090×465×250 mm (H×L×W)
Power supply	85-264 V AC, 47-63 Hz; 12 V built-in rechargeable battery (> 8 h of operation)
Standards compliance	ANSI N42.35-2016 (partially), IEC 62244:2019 (partially), IEC 61000-6-2:2016, IEC 61000-6-3:2011, IEC 61326-1:2012, EN 55022:2010 (class B), IEC 61010-1:2010,
Operating conditions	ambient temperature: −30 °C to 50 °C atmospheric pressure: 84 kPa to 106.7 kPa relative humidity: up to 98 % at 40 °C