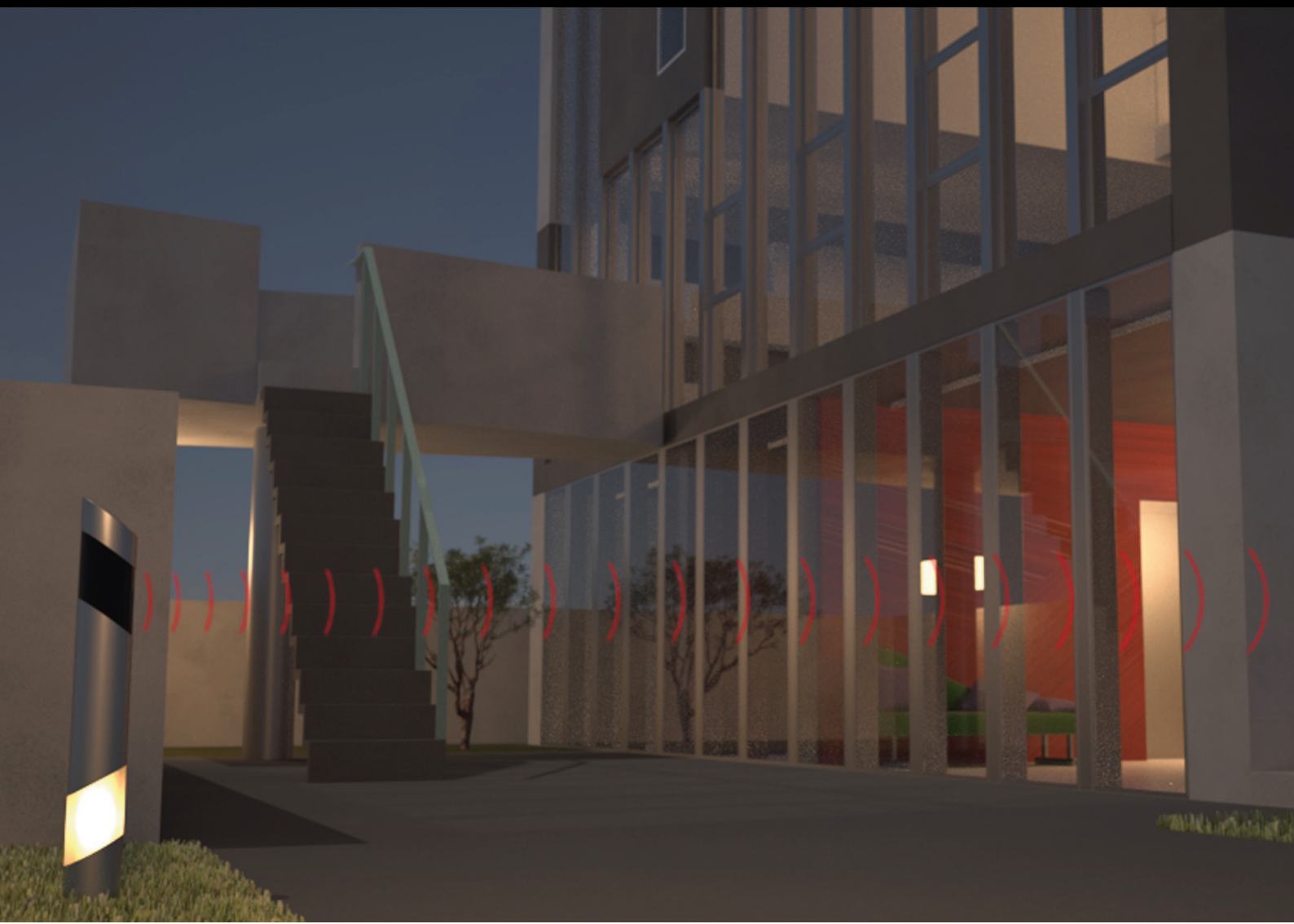
GPS STANDARD

Committed to security.

PERIMETER

PERIMETER PROTECTION SYSTEM RADAR ™



RADAR

perimeter protection system

Radar™ is a **high performance perimeter protection system** which uses electromagnetic waves projected along he perimeter to be protected, creating an impassable barrier. It offers a **modern and elegant style** and the **possibility to be integrated perfectly into any situation**, like an illuminated housing: for this reason it is particularly suited to public and private areas where it is necessary to maintain the site aesthetics but with the requirements for a physical barrier rather than an invisible protection system.
The Radar™ electronics is designed using a DSP microprocessor, with exceptional signal processing and analysis capabilities. It is possible to create a network of radar sensors to satisfy the requirements of any installation. It can also be used to direct PTZ cameras to the location of the intrusion.

OPERATION

Radar™ operates in the 24GHz band, creating an impassable barrier a few metres wide and 100m long. Any passage across the barrier will be detected by the system.
The barrier is generated by the emission of radar waves by the sensor; the waves reflected by anyone trying to cross the protected area will be re-captured and the DSP, analysing the received signal, can determine the exact crossing point of the intruder and the direction of movement.
Thanks to the scene auto-acquisition function the radar will not generate false alarms.

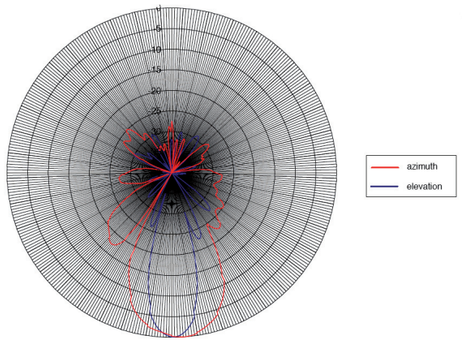
VERSIONS

There are **different versions**, dependent on the length of the barrier to be created: from 50-80-120-200m. The 120 and 200m versions are available with pinpoint, with precise detection of the crossing point. Also available are stand alone/rapid deployment versions for military use.

ADVANTAGES

-**Precise detection**, since the system is able to detect the direction and speed of movement of the intruder;
-**Suitable for any application**, since the sensor has a modern design and can be camouflaged into the environment;
-**Efficient because it can operate in any atmospheric conditions**;
-**Very low false alarm rate**;
-Possibility to be **integrated** with other protection systems and video surveillance systems;
-**Reduced installation** and maintenance costs.

Polardiagramm RADAR™



PERIMETER

TECHNICAL FEATURES

Parameter	Symbol	min.	typ.	max.	units	comment
Transmit frequency	f		24.000 – 24.250		GHz	depending on Vtune voltage
Varactor tuning voltage	V^{tune}	0.5		10	V	
Varactor input impedance			10 k		Ω	
Modulation input				150	kHz	
Tuning slope			50		MHz/V	
Output power	P^{out}		20		dBm	
Temperature drift	Δf		- 900		kHz/°C	
Antenna pattern	horizontal		12		°	azimuth
	vertical		25		°	elevation
Side lobe suppression	horizontal		15		dB	azimuth
	vertical		15		dB	elevation
I/Q balance	amplitude			6	dB	
	phase	60	90	120	°	
IF output	voltage offset		$V^{CC}/2$		V	
IF-amplifier	gain		30		dB	
	bandwidth		50 – 100k		Hz	
Supply voltage	VCC	4.75	5.0	5.25	V	
Supply current	ICC		60	80	mA	
Operating temperature	TOP	- 20		+ 60	°C	
Outline dimensions			~ 65.8 x 65.8 x 11		mm	compare drawing

Retailer of confidence

COMPANY WITH QUALITY MANAGEMENT
SYSTEM CERTIFIED BY DNV
= ISO 9001:2008 =

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