

VibraSector Detection System

Powered by Detection Technologies Limited

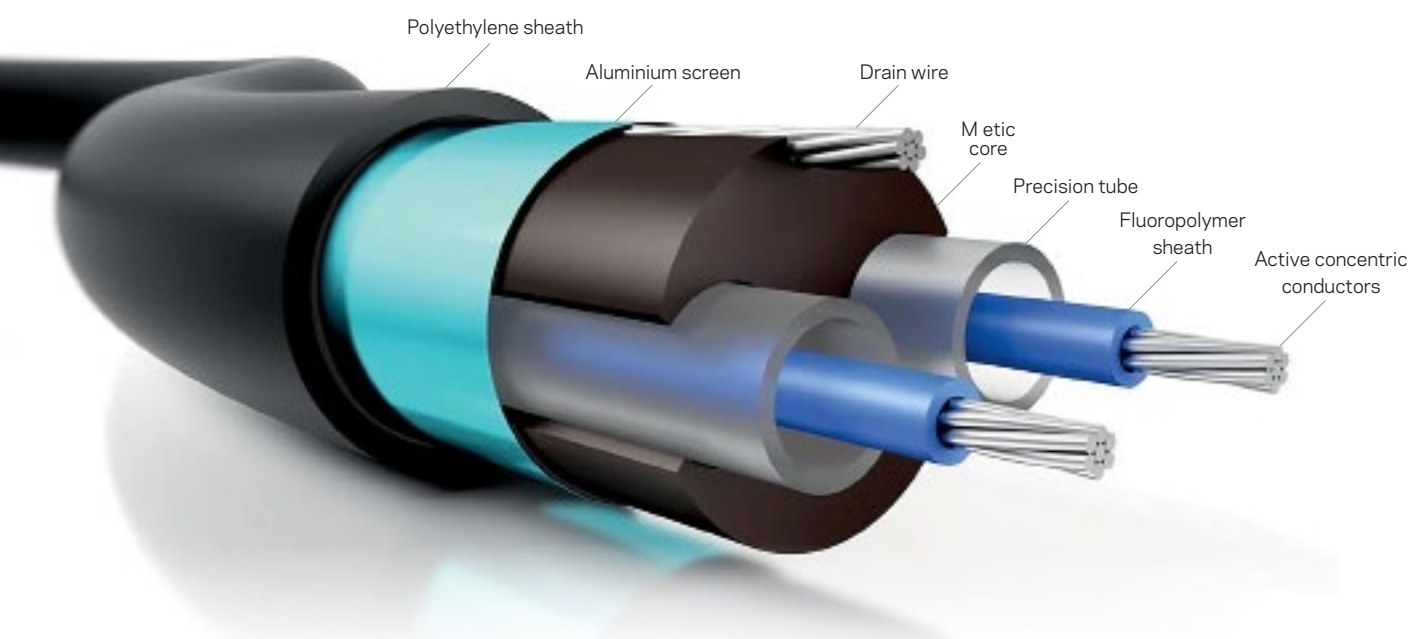


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Security



VibraSector Detection System



Installed on some of the most security-conscious sites in the world, including prisons, airports, power stations, military establishments, as well as many sensitive industrial facilities, VibraSector combined with VibraTek Plus sensor cable represents high performance in the field of microphonic perimeter intrusion detection systems. Offering accurate zone-based location of intrusions and events occurring at any point along the perimeter of a protected site.

VibraSector analyzer

Each VibraSector analyzer offers the ability to monitor up to 1000 metres, which may be segmented into 25 monitored zones, so that the location of intruder-related activity detected by the sensor cable may be identified accurately.

Each zone can be configured independently with different detection parameters, allowing for variations in fence quality and type, whilst maximising detection capability.

VibraSector can provide high quality audio verification in which audio signatures resulting from hostile events are stored in digital format so that they may be recalled and replayed from any remote location. This feature is a valuable tool that may be used by security staff to confirm received alarms as being the result of genuine intrusions.

VibraTek Plus sensor cable

VibraTek Plus is a fourth-generation vibration-sensitive linear sensor cable, specifically designed to provide high performance intruder detection capability when deployed on fences or other barriers used to define the perimeter of a secure site. The development of VibraTek Plus draws on knowledge gained over more than 25 years operational experience of intrusion detection system design, and in particular, from the highly specialised external perimeter market sector, where vibration sensing technology applied to fence structures constitutes by far, the most widely used and cost effective method of intrusion detection.

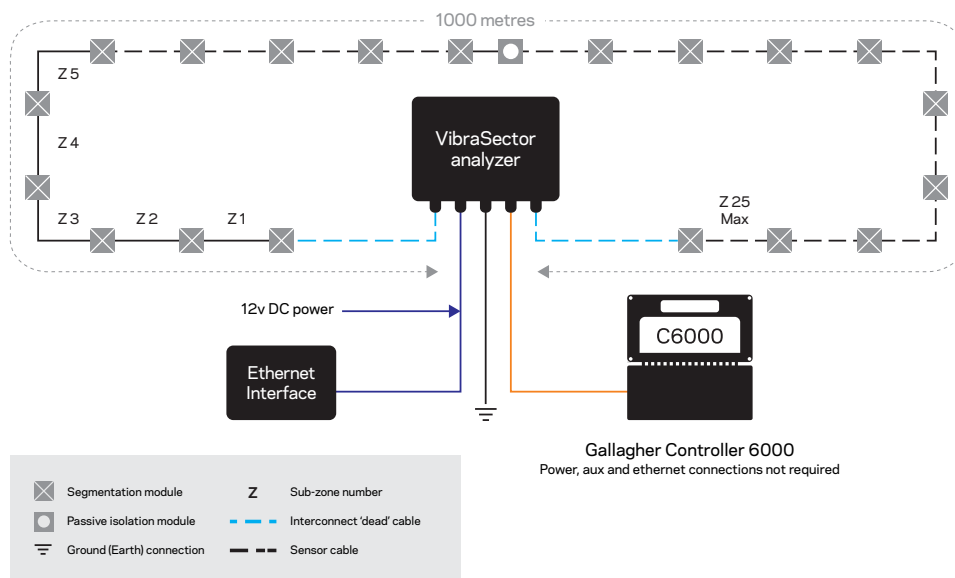
VibraTek Plus is a high performing, yet easy to install sensing device, directly attached to fences or other perimeter barriers using cable ties, cable clips, or by installation in conduit attached to such barriers, so that mechanical vibration generated as a result of hostile activity is coupled into the sensor device and converted to representative electrical signals.

System Architecture

With 25 zones per VibraSector analyzer and no limit to the number of analyzers per site, the VibraSector systems is able to scale to suit almost any site.

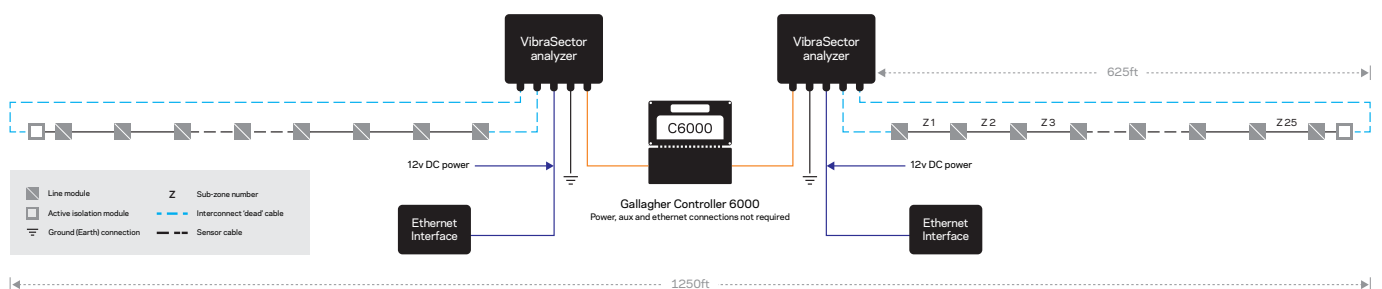
Small site configuration

Sites less than 1,000m in length. Up to 1,000m (3,280ft) sensor cable length (includes sensor cable around gates).

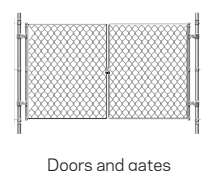
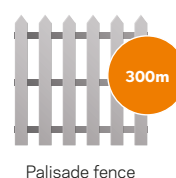
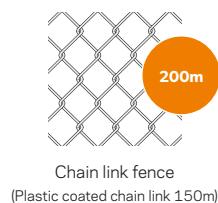
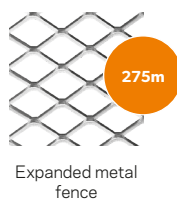
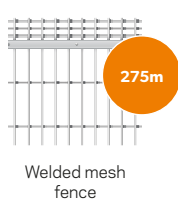


Large site configuration

Sites over 1,000m in length. Up to a total sensor and passive cable length of 1,250m (4,100ft) per analyser.



Approximate maximal zone length by fence type



Technical Specifications

VibraSector	
Inputs	
Power supply port	Input voltage range 9 - 24v DC
	Current consumption @ 12v dc: 175 mA
Sensor Cable	VibraTek Plus sensor cable
Monitored Contacts	Dry (volt-free) switch/relay contacts
Outputs	
Audio Monitoring	600 ohms isolated audio output @ 0dBm level
Status Relays (Form A)	Alarm event relay
	Sensor cable tamper relay
	TCP/IP comms failure relay
	External relay module comms failure relay
Audible Warning Device	Activated on following conditions: <ul style="list-style-type: none"> Alarm event detection sensor cable tamper detection TCP/IP comms failure External relay module comms failure
IP Network Connection	RJ45
Environmental Specification	
Operating temperature range	-40° to +70° Celsius
Relative humidity	90% non-condensing
Physical Specification	
Enclosure	Pressure die-cast aluminium
Sealing	IP65
Cable Glands	3 x M20 (Service Cables) 2 x PG9 (Sensor Cables)
Cable Gland Sealing	IP66
Dimensions	260 w x 160 h x 90 d (mm)
Weight	1.8kgs

VibraTek Plus	
Physical Specification	
Cable Diameter	8.0 mm
Sheathing Colour	Black
Sheathing Material	Low Density Polyethylene (LDPE)
Sheathing Material UV Lifespan	Greater than 15 years (equatorial exposure)
Active Elements	Concentrically constructed tinned copper conductors
Active Element Sheathing	High molecular weight fluoro-polymer
Electrostatic Shield	Aluminium/mylar composite tape
Longitudinal Strength Element	1 multi-strand tinned copper wire (uninsulated) 2 polymer tubes
Operating Temperature Range	-40°C - +90°C
Relative Humidity Tolerance	100% condensing
Installation Temperature Range	0°C - +40°C
Weight	93 g/metre
Ultimate Tensile Strength	1kN
Minimum Bend Radius	95 mm
Maximum Applicable Tensile Force	60 Newtons (6kgf)
Electrical Specification	
Bandwidth (-3dB)	10Hz - 5.2 kHz ¹
Typical Signal Voltage Level	1mV
Active Element Impedance	8 ohms per 100 metres
Static Magnetic Field Strength	250 Gauss (0.025 Tesla) minimum
Electrostatic Shielding Factor	100%
Mean Time To Repair (MTTR)	15 minutes ²
Mean Time Between Failure (MTBF)	Greater than 80,000 hours ³

¹ OEM test procedure

² Using OEM approved/supplied repair kit

³ Subject to OEM approved maintenance schedule

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