

POWER



SUPPLY WITH
INTEGRITY



KNOWLEDGE = POWER

Ensuring integrity of supply to customers is essential for power utilities and network operators especially in today's increasingly competitive environment. Operators must optimise the efficiency of the grid and maximise the lifetime of assets. In order to meet these increasing demands it is essential to understand the condition of your network at every point.

Yet achieving this knowledge and delivering on these demands requires an absolute certainty about what is really happening in your asset, because the integrity of your network is only as robust as the weakest point. Only Sensornet's Digital Monitoring solutions have the range, speed and accuracy to give you continuous and complete certainty.

Close the monitoring gap and you can move ahead with integrity.

BE THERE

CLOSE THE MONITORING GAP

As the demand for continuous supply and integrity of the power grid increases, it is more important than ever to close the gap between what you assume is happening and what is actually happening. Only Sensornet's Digital Monitoring solutions can close this monitoring gap.

GO FURTHER

With the sensitivity, speed and reach to know your asset is always covered and data is continuously updated.

KNOW MORE

With effective analysis of the network that allows you to meet supply demands and plan effectively.

GET CLOSER

With a collaboration that fully understands your business goals and the unique circumstances of your asset.

PREDICT WITH CERTAINTY

Today's extreme distances and demands call for advanced solutions that really put you in the picture.

From the remotest overhead lines to long-distance subsea cables, wherever your monitoring gaps are, we'll work with you to provide the certainty and integrity you need throughout the grid.

From design and installation to data delivery and analysis, by taking into account the unique context and physical circumstances of your network, together we'll find the perfect alignment of your needs and our expertise.



REACHING OUT TO CLOSE YOUR MONITORING GAP

RESPOND DYNAMICALLY
IN EMERGENCY RATING
SITUATIONS WITH UPDATE
INTERVALS OF

10
SECONDS

FULL COVERAGE OF
LONG-DISTANCE POWER
CABLES WITH CONTINUOUS
MONITORING FOR UP TO

30

KILOMETRES

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UNDERGROUND CABLES

Existing thermal modelling and monitoring solutions cannot predict, detect and prevent hot spots caused by changes in the surrounding thermal environment. Sensornet's Digital Cable Rating solutions allow you to optimise the amount of power in the cables, while operating within rating limits to maximise the network lifetime.

SUBSEA CABLES

Subsea cables are becoming more difficult to access and expensive to repair. Yet it has never been more important to maintain the integrity of these vital assets. By providing continuous real-time monitoring, Sensornet's Digital Strain Profiling and Digital Cable Rating solutions ensure integrity during installation and enable asset lifetime prediction.

OVERHEAD LINES

Sag in overhead power lines leads to a reduction in the lifetime of the network, short-circuiting and severe supply disruptions. Sensornet's Digital Strain Profiling and Digital Cable Rating solutions monitor the network to maximise load without risking its integrity.

POWER TRANSFORMERS & ANCILLARY EQUIPMENT

Hot spots in cables, ancillary switchgear and joints can lead to reduced lifetime, supply failure and disruption. Sensornet's Digital Thermal Profiling and Digital Condition Monitoring solutions provide a real-time thermal picture of your equipment, maximising network efficiency without putting your infrastructure at risk.

REMOTELY OPERATED VEHICLES (ROVs)

Power cables supplying ROVs often overheat during operation when excess cable is left on the reel. This can lead to cable failures or a drastic reduction in the cable's lifetime. Sensornet's Digital Thermal Profiling can locate when and where these hot spot occur allowing for preventative action.

DETECT TEMPERATURE
CHANGES OF JUST

0.01°C

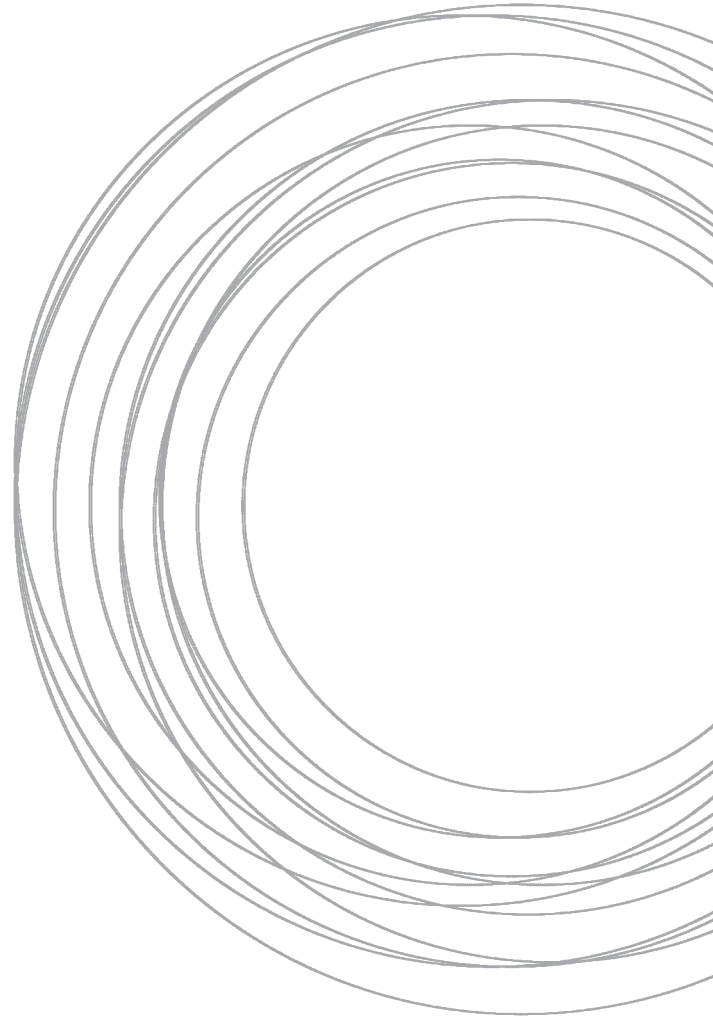


SENSORNET DIGITAL MONITORING SOLUTIONS

	ISSUES	MONITORING GAPS	MONITORING SOLUTIONS	RESULTS
Underground cables	<ul style="list-style-type: none"> Hot spots Load optimisation Heat detection and ventilation control in tunnels and ducts Asset lifetime prediction 	<ul style="list-style-type: none"> Limited real-time thermal ratings Ability to predict and locate hotspots Limited understanding of true operating environment and asset lifetime 	<ul style="list-style-type: none"> Digital Cable Rating Digital Condition Monitoring 	<ul style="list-style-type: none"> Run network at higher load with lower risk of exceeding rating Understanding of condition of assets Extended lifetime
Subsea cables	<ul style="list-style-type: none"> Risk of damage during installation Wave and tidal movements Shifting sands No redundancy in network 	<ul style="list-style-type: none"> Range, speed and accuracy of monitoring Limited understanding of structural strain 	<ul style="list-style-type: none"> Digital Cable Rating Digital Strain Profiling 	<ul style="list-style-type: none"> Assurance of structural integrity during installation Understanding of structural integrity and thermal rating Extended lifetime
Overhead lines	<ul style="list-style-type: none"> Cable sag and safety clearance Asset lifetime prediction 	<ul style="list-style-type: none"> Limited real-time thermal ratings Ability to predict and locate hotspots Limited understanding of true operating environment and asset lifetime 	<ul style="list-style-type: none"> Digital Cable Rating Digital Strain Profiling 	<ul style="list-style-type: none"> Run network at higher load with lower risk of cable sag
Power transformers & ancillary equipment	<ul style="list-style-type: none"> Hot spots in windings Oil leaks and joint failures Asset lifetime prediction in aging equipment 	<ul style="list-style-type: none"> Limited real-time thermal ratings Ability to predict and locate hotspots Limited understanding of true operating environment and asset lifetime 	<ul style="list-style-type: none"> Digital Condition Monitoring 	<ul style="list-style-type: none"> Run network at higher load with lower risk of exceeding rating Understanding of condition of assets Extended lifetime
Remotely operated vehicles (ROVs)	<ul style="list-style-type: none"> Cable overheating on reel Hotspots Reliability 	<ul style="list-style-type: none"> No indication if cable is overheating 	<ul style="list-style-type: none"> Digital Condition Monitoring Digital Strain Profiling 	<ul style="list-style-type: none"> Run cable at higher load with lower risk of exceeding rating Understanding of condition of assets Extended lifetime Reduction of cable size and associated costs

THE SENSORNET STORY

Launched in 1998, Sensornet provides the world's most advanced monitoring solutions, using next generation fibre-optic temperature and strain measuring systems. Our proprietary technology is supported by a highly qualified technical, operations and management team and has been utilised by many of the world's leading utilities and network operators. From system commissioning and installation, through to advanced interpretation and cable rating systems, Sensornet works with leading industry experts to provide the complete monitoring package to transform your ability to monitor mission-critical infrastructure and obtain meaningful and valuable information to help you maximise the efficiency and prolong the lifetime of your asset.



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