

## LIRIS – Preventative System Solution

- ✓ Multicriteria Optical Strand with integrated mini station
- ✓ Function "18 in 1" (Until 18 conclusive information)
- ✓ No connection cable
- ✓ Autonomy until 5 years

**LIRIS** the **Autonomous Optical Strand** is a measurement system particularly innovating, allowing for a cumulated deformation measure, without dead time.

It transmits data with a **radio connection**.




Its distinctive asset is to be free of:

- Cable link
- Any power supply

Its length is 2 meters.



**LIRIS** is available in **3 modes of preventive monitoring**, from the one shot measurement point until the permanent surveillance with periodical visits.

 <p>WHITE</p>	<p><b>ON SITE</b></p>	<p><b>ONE MINUTE CAPTURE</b></p>	<p><b>COMPARATIVE CHECK</b></p>	<p>Real-Time information on site. Check against comparative data.</p>	<p>CHECK</p>
 <p>CHROMIUM</p>	<p><b>ON SITE</b></p>	<p><b>ONE MINUTE CAPTURE</b></p>	<p><b>LAST 24H STORAGE</b></p>	<p>Last 24 hours of data available on site. Inquire into prospective structural issues.</p>	<p>INQUIRE</p>
 <p>BLUE</p>	<p><b>ON SITE</b></p>	<p><b>REPORT</b></p>	<p><b>LAST 6 MONTH STORAGE</b></p>	<p>Last six months of data available on site and out site. Regular reports.</p>	<p>STATEMENT</p>

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## Applications



# MEASURING RANGE

## Optical strand

<b>Sensor length :</b>	2 m
<b>Measuring path:</b>	10 mm
<b>Resolution:</b>	0,001 mm
<b>Accuracy error with constant temperature:</b>	$\pm 0,002$ mm
<b>Measuring frequency:</b>	Up to 50 Hz
<b>Repeating accuracy:</b>	1 %
<b>Response speed:</b>	Infinite (dead time = zero)
<b>Temperature range:</b>	-20 to 60
<b>Temperature sensitivity:</b>	$3 \times 10^{-6}$ m/K
<b>Stability, fatigue behaviour:</b>	>300 million measuring cycles without degradation of metrological properties
<b>Electromagnetic compatibility of the Optical part:</b>	Insensitive and neutral
<b>Service life:</b>	Ca. 100 years
<b>Splicebox:</b>	Dimensions [L x D x H] : [100 x 40 x 15] mm Material : Aluminium. Protection : IP67

## Mini-station

<b>Station Box :</b>	Dimensions : [230 x 40 x 60] mm Weight : 600 g Material : Anodized aluminium Protection : IP 67
<b>EMC :</b>	IOS qualification « Industrial and Residential equipments ».
<b>Radio link :</b>	Utilization of the ISM bands (*): 433,92 MHz/ 868 MHz/ 915 MHz (*) Industrial, Scientific and Medical.
<b>European Norm : (Incl. Russia and Africa)</b>	ETSI EN 300-220
<b>American Norm : (North &amp; South)</b>	(FCC) CFR 47 Part 15
<b>Transmission Power :</b>	10 mW as antenna output
<b>Reception Sensitivity :</b>	-100 dBm
<b>Power :</b>	Special battery integrated to the box lid of the Station Box,
<b>Autonomy :</b>	5 years (under utilization conditions).
<b>Serial Mounting with OSMOS BUS : (Available in end of 2012)</b>	Up to 125 LIRIS per line, communication and supply of each stations every 1 km maximum. For important lengths if OSMOS BUS and/or important numbers of serial LIRIS, please contact us

## Storage

### *In Blue configuration*

**Dynamic storage capacity :** 12 minutes with 50 Hz or ~170 events of 5 seconds.

### *In Blue configuration*

**Static storage capacity :** 6 months, with 1 recording per hour.

**Trigger Types :** Static and dynamic

## Radio modem

<b>Power supply :</b>	Via USB
<b>Communication Port :</b>	USB ou RS 232
<b>Antenna connection :</b>	Type mini SMA
<b>Transmission power :</b>	10 mW
<b>Receive sensitivity :</b>	-100 dBm
<b>EMC :</b>	IOS qualification « Industrial and Residential equipments ».

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