


Yeltech



NEW: Tension Monitoring with OLE Balance Weight Monitoring System

Yeltech introduces an intelligent, ultra-light, compact, and easy to install device which monitors the movement of the weights, transmitting the real-time data to their smart hub. Setting the bar for predictive and preventative smart monitoring.

Proactive Maintenance

Founded In 2004, Yeltech have succeeded in understanding industry needs and advanced in creating innovative solutions, becoming a market leader for all monitoring needs. Using wireless

data transmission capabilities, Yeltech create a seamless communication between product-to-engineer, enabling for maximum monitoring benefits. With a unique, cloud-based system, their products can provide accurate, real-time updates for effective asset management.

Yeltech Offer practical and cost-effective engineering solutions for an expanding range of industries; including rail, buildings and structures, water, drainage, and environmental management. Their portfolio is an array of proven, established and, dependable technologies, that keeps safety and

adaptability at the forefront. The newest attribute to their product line is the Balance Weight Monitoring Device (BWMD) for OLE maintenance.

Overcoming Challenges Together

Overhead Line Equipment – or OLE – is the name railway engineers give to the assembly of masts, gantries and wires found along electrified railways. The steel and cable have only one purpose – to supply power to make electric trains move.

The catenary and contact wires are installed in lengths that are tensioned at either end to keep the contact wire still, so that a good contact with the pantograph is maintained. Both wires are tensioned with the tensions either being made to be constant (auto tension) or fixed (fixed termination), causing the tension to vary with temperature.

Fixed termination lines will expand during hot weather, reducing the tension in sections of the OLE environment. This can lead to a risk of passing trains damaging the contact wire, eventually leading to dewirements and significant delays to services on the network.

The conventional tensioning mechanism consists of a braced mast and iron weights. These weights move up and down according to the ambient temperature which affect the tensioning and can cause service disruptions.

Wirelessly, Remotely, Accurately

The Balance Weight Monitoring Device (BWMD) Yeltech have

developed uses advanced IoT technology, monitoring the movement of the weight and the ambient temperature continuously, logging all real-time data onto YelCloud; an intelligent hub created for meticulous monitoring and data analysis.

The innovative system features smart alarming capabilities; allowing pre-determined thresholds to be specified, and when the thresholds have been met or exceeded, the device will send an alarm to notify the end user, implementing further safety measures to be put in place and/or maintenance is required.

Effectively reducing manual monitoring, visits to track and fulfilling the goal of less boots on ballast.

How It Works

The BWMD is programmed to transmit the data on specific instructions with an internal threshold of a given movement (i.e., +/-20cm). The BWMD will wake up every 30 minutes to read and record the values of temperature and the

measurements of A & B (see diagram opposite).

The device has 2 transmissions modes –

Normal transmission rate of the BWMD means the device will store the data collected every 30 minutes if the measurements do not exceed thresholds set. The data/readings will then be sent to the server every 12 hours.

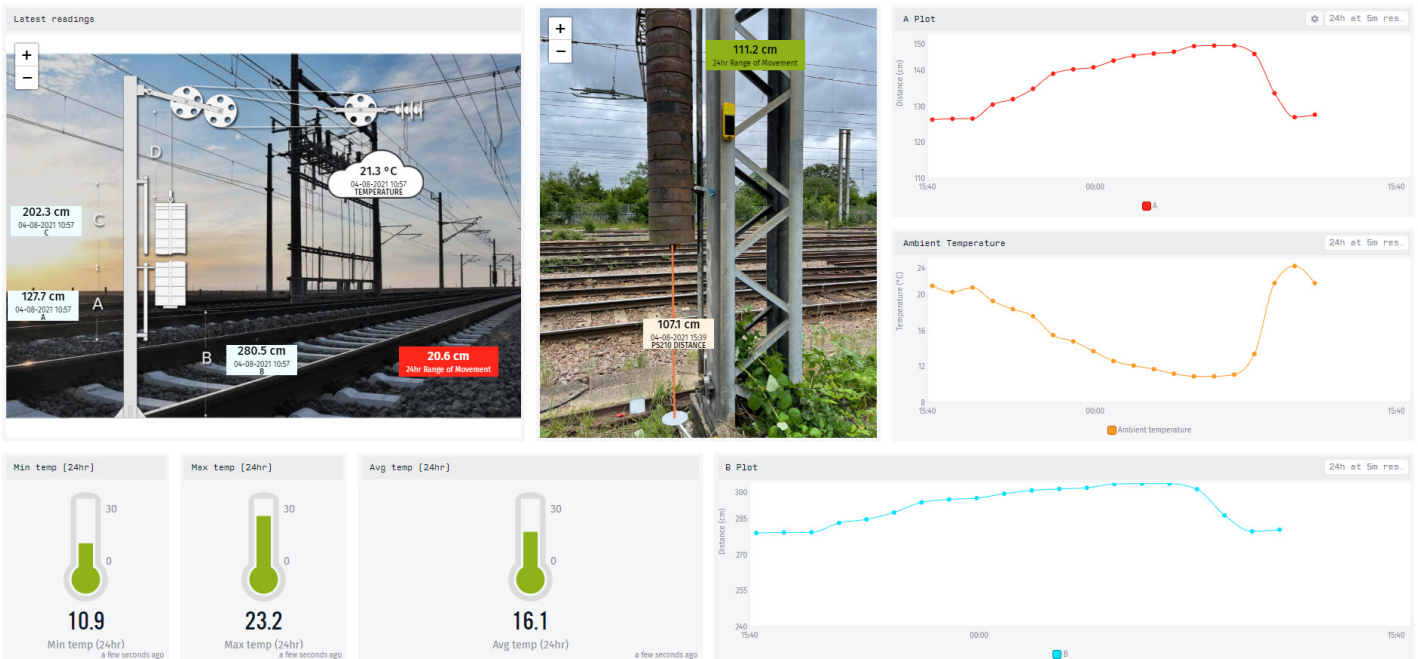
Fast Transmission rate of the BWMD is when the movement exceeds the threshold (i.e., +/-20cm - this threshold will be set by the end user). When the BWMD wakes up, if the weights have moved more than 20cm, then it will transmit data to the server every 30 or 60 minutes, maintaining the operation in Fast Transmission Mode until the distance is below the 20cm set.

Key Features and Benefits

- Ultra-Lightweight design and easy to install - Installation can be carried within 10 minutes.
- Long life battery (up to 3 years) – Avoiding to regular site visits.

Balance Weight Monitoring Device in use in Bedford for Network Rail.





- Early Identification of potential tension issues - Alarms will be sent when a predetermined threshold has been reached.
- Readily available App – View real-time data and measure devices on the go.
- 24/7 Technical Support.



**EMERGENCY
WARNING
BOARDS**



**RAIL
TEMPERATURE
MONITORS**



**RAIL
WEATHER
STATIONS**

Technology you can Trust

Yeltechs leading technological and engineering capabilities do not end there, continually refining their range of products and services within Transport Infrastructure to meet evolving customer requirements. Striving to work with an expanding group of customers and industries, both in the UK and in several key international markets – including the United States, Europe, and the Middle East. Yeltech has the proven track record in the railway and transport sectors.

Yeltechs expert team have delivered a wide range of solutions to the industry, including sophisticated track temperature monitoring,

wireless safety signalling solutions as well as track/bank-side structure surveying. Also developing and supplying custom applications for testing vibration and void at track points. All can be managed within their cloud based IoT system.

With an impressive skill set covering the development of bespoke solutions in addition to comprehensive mechanical, electrical and electronic capabilities, Yeltech has the complete range of necessary skills in-house.

Reliable Customer Support

Their multi-project teams work closely with our customers to

deliver advanced and cost-friendly installations for the utilisation of reliable data or the manufacture of monitoring products. Full technical support is offered for the use of all products and their expert team is available to provide ongoing training and assistance.

To find out more on Yeltechs products and how they can help with safe, secure, and reliable solutions, visit www.yeltech.com.



INNOVATION FOR A SAFER WORLD

1600+

PRODUCTS
IN SERVICE

200+

CUSTOMERS

50+

YEARS
EXPERIENCE

0

LIMITATIONS

EXPERT IN IoT SOLUTIONS

Yeltech design and manufacture bespoke remote monitoring products; offering practical and cost-effective engineering solutions. Using expert experience and advanced IoT & AI technology, we strive to create a partnership where we are trusted to deliver solutions that aid and produce solid results to suit each individual need.

YelTemp | YelWarning | YelCharge | YelWeather | YelCloud

info@yeltech.co.uk | www.yeltech.com | +44 (0)845 052 3860
Building 2, Guildford Business Park, Guildford, Surrey, GU2 8XH, United Kingdom