

## TAKING THE WEIGHT OF CONTAINER LOADING LEGISLATION

Last November, the IMO's Maritime Safety Committee officially adopted the new Solas requirement that, as a condition for vessel loading, the weight of a packed export container must be verified by the shipper. Under the legislation, which is implemented in July 2016, verification of the packed container's weight will be a condition for vessel loading. Two methods have been deemed acceptable: either weighing the loaded container or weighing the cargo and then adding the tare weight of the container.

For those operations that do not currently have weighing equipment, LoadSense from Sensor Technology could be a solution. Designed to be easily integrated within the crane hook, this allows weighing processes to be fully integrated with handling operations. All live data is captured in real time and can be transferred to a database, stored, totalised and analysed. An on-board single

chip computer records, analyses and archives readings, while wireless communication capability can transfer data in real time to a host computer.

Thanks to its internal batteries, operation of the device is completely autonomous, meaning it can be deployed with minimal disruption to mobile harbour crane operations, and will automatically begin transmitting data.

The LoadSense package includes the intelligent load sensor itself, plus a hand-held receiver display. The load sensor is based on proven strain gauge technology, and is calibrated as standard in the range from one to 20 tonnes, with other ranges up to 50 tonnes available soon. The transmitter enables accurate load data to be sent to a variety of displays simultaneously: a hand held display, a cabin mounted display, and a receiver connected to a PC, allowing real time measurement of the load at the same time as



recording and processing real time values.

LoadSense and its sister technology, TorqSense, are already being adopted within mobile harbour cranes around the world for dockside unloading operations.

**Sensor Technology**

[www.sensors.co.uk](http://www.sensors.co.uk)

## CONTROLLING THE POWER OF AN ELECTRIC RACING KART

Currently in its prototyping stage, ZeroK is an all-electric racing kart power system. The kart is almost silent, with enormous torque for swift, lag free acceleration, a top speed of over 70mph, and 0-60mph in around 4.5 seconds.

Developments to the power system have recently included a new supercharged controller, heavier cables and new motor/electrics cooling that delivers up to 40hp with a short-term potential of 80hp and a larger capacity hot swappable battery.

To help finely control this power, the ZeroK team specified Variohm EuroSensor's VLP series linear position sensor for the kart's throttle pedal control. Suitable for demanding race track conditions, its essentially infinite resolution and 0.1% linearity, its repeatable and consistent performance, translate

into optimal throttle control, the company explains. The sensor also has a conductive plastic resistance element and multi-fingered precious metal

wipers in an elastomer damped mechanism to ensure smooth and uninterrupted contact.

The VLP linear position sensor is used across motorsports for ride height, steering angle, gearshift and suspension, as well as throttle control for four- and two-wheel high-performance cars and bikes.

ZeroK is looking for sponsorship to help grow and develop v13, its most advanced version so far – <https://www.facebook.com/ZeroK.Kart>



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