

LUFFT WEATHER SENSOR IS TESTED AT THE BRIDGESTONE WORLD SOLAR CHALLENGE



Photo: Solar car from the Belgian Punch Powertrain Solar Team

The Bridgestone World Solar Challenge is one of the most popular competitions for solar vehicles in the world. The spectacular race took place in mid-October and encompassed 3,000 kilometres across Australia. With the help of the Lufft WS504 intelligent weather sensor, the Belgian Punch Powertrain Solar Team finished in the top three.

"The Australian solar race is among the most challenging in the world and we are very pleased to be able to support the Punch Powertrain Solar Team again," says Tobias Weil, Lufft Marketing Director. "We congratulate the entire team on an amazing third-place finish."

As early as 2011, the sensor manufacturer has already supported the Belgian team, consisting of 21 mechanical engineering students, by providing them with weather sensors. This year, the intelligent WS504 transmitter was used during the race to measure the sun's radiation intensity and determine the wind force. Both aspects were fundamental to the racing team's successful strategy.

The intensity of solar radiation determines how much energy is needed to move the car. Since wind resistance is the biggest contributor to loss of speed in solar-powered vehicles, the team had to keep a close eye on this measurement component during the competition. However, stronger winds can have a positive effect on the speed of the vehicle. The wings of the solar car act as sails with the side winds. This automatically requires less sun energy.

"We have remained loyal to Lufft's sensors because they have proven in the past that they are extremely robust and reliable. An added bonus is their compact design. Therefore, it is quite easy to take a weather station in a car and transport it around Australia," explains Ruben Dekeyser, a member of the Belgian Punch Powertrain Solar Team.

In order to be prepared for weather changes during the race, the team used European model weather forecasting. Since these are never quite accurate, they were accompanied by three additional vehicles. Their task was to look out for

weather conditions like large clouds, which can adversely affect the speed of the vehicle, and wind intensity to control wind speed.

Knowing how to deal with the given weather conditions is a significant factor in the Bridgestone World Solar Challenge, which can determine victory or defeat. By using the compact WS504 all-in-one weather sensor from Lufft, the Punch Powertrain Solar Team had data from a total of six measurement parameters such as temperature, relative humidity, air pressure, wind direction, wind speed, and radiation available.

The lightweight 1.5 kilo (2.2 pounds) sensor is completely maintenance-free since it does not require any moving parts and provides reliable data even in extreme conditions.

Important facts about the WS504:

- Compact all-in-one weather sensor
- Tiltable pyranometer
- Built-in data pre-processing, universal interface
- Freely-selectable output logs
- Compatible with many common meteorological and hydro meteorological data loggers as well as PLS systems thanks to its open communication protocol
- Maintenance-free operation
- Suitable for all climates
- Ventilated temperature and humidity sensors
- Built-In heater

ABOUT G. LUFFT MESS - UND REGELTECHNIK GMBH:

Since its founding by Gotthilf Lufft in 1881, G. Lufft GmbH has been the leader in the production of climatological measuring equipment – always true to the motto "tradition meets innovation". Lufft's capacity for innovation and precision has helped its products establish the solid reputation they enjoy around the world. The company's products can be found in use wherever variables such as air pressure, temperature, relative humidity and other environmental factors need to be measured. Together with its subsidiaries in the U.S. and in China, the company has 105 employees. In November 2012, G. Lufft GmbH was awarded the German Standards Brand Prize and was named a "Brand of the Century". For more information visit www.lufft.com.

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