

APPLICATION NOTE: Gibson Technology choose Variohm EuroSensor D-shaft throttle position sensors for Le Mans 2022

Based in Repton, Derbyshire, **Gibson Technology** is a world leading manufacturer of motorsports powertrains encompassing engines, electronics, and electronic gearshift systems. In abundant action across the globe supporting teams in many major race series', its latest development 4.2 litre GK458 engine is the exclusive choice for LMP2 class racing - competing amongst others in the FIA World Endurance Championship (WEC) which includes the prestigious **Le Mans 24 Hour Race** where this year's competition fielded no less than 28 Gibson Technology equipped cars. As part of the electronic fuel injection equipment on the naturally aspirated 90-degree, DOHC V8 engines Gibson Technology chose Variohm EuroSensor's Euro-XPD series Hall Effect angle sensors to provide precise throttle position feedback. As with all Gibson Technology powertrain systems, long endurance and extreme reliability are key factors and over the complete duration of this year's 24-hour race, the 28 cars competed without any issues.

Based on Variohm EuroSensor's motorsports-proven **Euro XP** range of Hall Effect non-contacting angle sensors., the **Euro-XPD** features an 8 mm diameter D-shaft drive which, without the need for a separate coupling, is easily adapted and extensively used for throttle position sensing in motorsports. The sensor is supplied as standard with an electrical angle of 360° or may be optionally ordered with a programmable angle from 30° to 360° in 10° steps. Its redundant CW and CCW ratiometric output has optional interfacing parameters of 5 to 95% or 10 to 90% of the 5V DC supply voltage with independent linearity to within +/- 0.5% of each signal range.

The non-contacting Hall Effect design offers an almost unlimited life with up to 50 million movements and, with the optimum magnet to sensing-element gap maintained within the IP68 sealed assembly, its extreme robustness is complemented with an extended vibration rating and operating temperature durability from -40° C to +125° C (short term to 150° C). These specifications combine with a choice of 32 or 38 mm PCD slotted hole mounting for M4 screws to provide wide-ranging application flexibility as well as form-fit interchangeability with competitive models. Electrical connection is via 500 mm long sleeved cable with customised connector options such as the motorsports industry standard Deutsch DTM available on request.

The Euro- XP family of Hall Effect non-contacting rotary sensors also include shaft driven Form 'U' and spring coupling alternatives as well as separate puck and magnet versions. This product family is widely used in motorsports

for steering angle, ride height, pedal, and gear position as well as throttle position. Variohm EuroSensor also manufactures miniaturised sensors with Hall Effect technology as the Euro-CMR series offering similar specification characteristics in micro-sized packages as flange or screw-mount sensors in shaft driven and puck/magnet styles.

Variohm EuroSensor designs, manufactures, and supplies **motorsports** and many other industries with a wide range of sensors and transducer technologies including other rotary sensors, linear position sensors as well as pressure sensors, temperature sensors and more in a wide choice of analogue, digital and communication bus outputs. For more information visit **www.variohm.com**, email **sales@variohm.com** or call +44 (0) 1327 351004.