

New Product Applications

Engine Temperature Sensing

August 2012



Customer

Rochester Sensors has been a long term supplier of temperature switches and sensors to the major world-wide manufacturers of diesel engine based equipment and in particular, of generator sets. Generator sets are engineered to be robust and durable, especially for the rental markets, and the introduction of electronics engine management systems by many manufacturers, to regulate exhaust emissions, is symptomatic of the need to move with the times and remain competitive both in cost and environmental impact.

Application

These new engine management systems require upgrades of the various data inputs such as engine oil pressure, water temperature, oil temperature and fuel level sensors. Traditionally, these were considered low cost throw-away items whose accuracy and reliability were known to be poor, and typically, an oil temperature sensor could have a $\pm 10\%$ accuracy which modern EMS controllers cannot accept. Therefore, there became a need for a more accurate, but still cost effective, product to replace the inaccurate sensors and which could provide an acceptable input to the controller.

Product

Rochester Sensor's wide experience of industrial temperature sensors led it to develop the T/T10X range of sensors based upon a PT100 thermistor. This provided a ten-fold improvement in accuracy ($\pm 1\%$) and enabled the sensor housing to be built with a much reduced footprint and lesser weight. An additional benefit is that this sensor reacts to temperature change very much faster than the old style sensor. For just a small cost, equipment costing over £60,000 can be protected from the devastating effects of cooling and lubricating fluids which have exceeded their service temperature. Rochester Sensors UK in-house long term temperature testing has validated the design to be reliable and stable in all relevant environments.

Rochester Sensors is very pleased to be supplying such a high profile and prestigious company with a custom designed product. This is one more in a long list of application based products which Rochester Sensors has designed and put into production.

RochesterSensors.com

Since the suitability of these products depends upon a wide range of factors not in our control, Rochester Sensors expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, Rochester Sensors reserves the right to make material changes, and or technical changes without notification.