High Temperature Fiberoptics

The Problem
Runout measurements of a high speed rotating shaft inside an electric furnace at 482°C.

The Solution
In this case, model RC60 sensors were chosen to measure runout on the high speed shaft. A custom fiberoptic tip was made Ø 0.25” x 6” L to provide solid support for the length of fiberoptics exposed to the high temperature. Ceramic-based epoxy was used in the construction of the sensor tips. This gives solid sensor tips a capability of 482°C, which is the limiting temperature of the borosilicate glass fibers. Specify Option T9 for 482°C tips.

NOTE. Fiberoptic cables will become very brittle after exposures to temperatures above 340°C, and therefore, they should not be flexed during or after such exposure.