

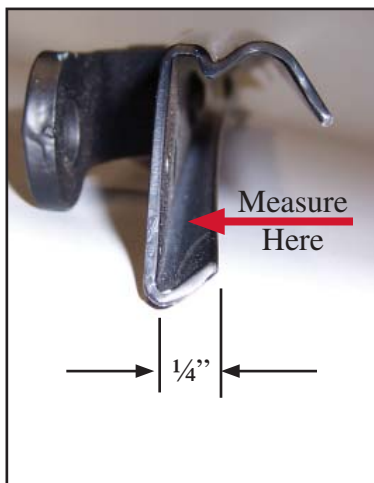
SENSOR FOR AUTOMOTIVE CONVERTIBLE TOP TESTS

A section from the support frame of an automotive convertible top was sent to the factory for an evaluation.



The customer needed a sensor to measure the lateral (horizontal) position of the frame after it opened and returned to the closed position. The requirement was for the frame to return to its rest position within $\pm 1/8$ ".

The bottom edge of the frame has a lip that protrudes $1/4$ ". Therefore the sensor needs to operate at a stand-off distance greater than $1/4$ " to avoid interference with the lifting of the frame.



The model RC190 sensor meets this requirement. It can be used to make measurements for gaps of 350 to 800 mils.

APPLICATION

The Problem

- The part to be measured is black anodized
- $3/8$ " Minimum Gap Needed To Avoid Interference
- At Least $1/4$ " Operating Range Required



Model RC190 Probe Calibration setup

Probe tip

A model RC190-R sensor with ambient light rejection was built and calibrated to the black target. Ambient Light Rejection (Option R) was added because of the low signal strength of light reflected from the black anodized frame.

