

Side-Viewing Sensors (for Shock Testing)

THE PROBLEM

Sensors were needed to capture dynamic measurements during a pyro shock test. Available space was tight: the sensor needed to fit within a gap of 25 mm and the target was to be located 10 mm from the sensor. Additional sensor requirements:

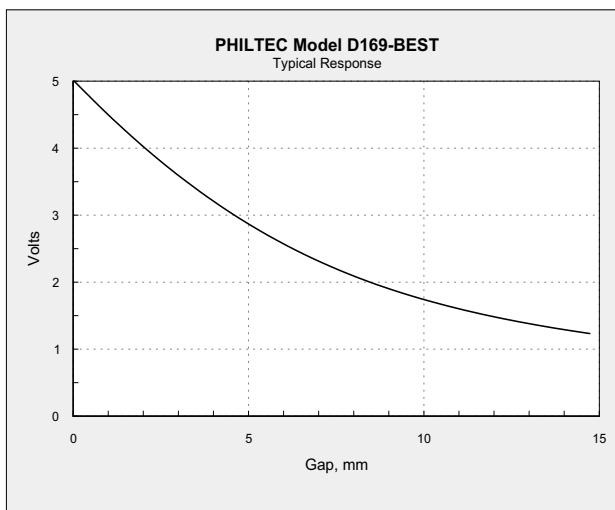
- Bi-directional displacement of ± 4 mm was expected
- A frequency response of 10 KHz
- The sensor would need to survive shock loads of up to 200 g's from any direction

THE SOLUTION

Philtec's side-viewing sensor model D169-BC1EST was designed into this application. The sensor tip was ruggedly constructed for shock survivability with a right angle prism solidly embedded inside of a threaded housing.



The fiberoptic cabling is 10 Ft long with SS Interlok sheathing and an in-line connector located 3 Ft. from the sensor tip.



Side-Viewing Probes (available for D models only)

Side-viewing probes turn the light signal 90° in minimal space by utilizing a right angle prism bonded to the face of the fiberoptic bundle.

With standard end-viewing models, type D sensors have near side and far side operating regions.

With side-viewing D probes, only the far side region is available (with less linearity than standard models).

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Fiberoptic Sensors for the Measurement of Distance, Displacement and Vibration