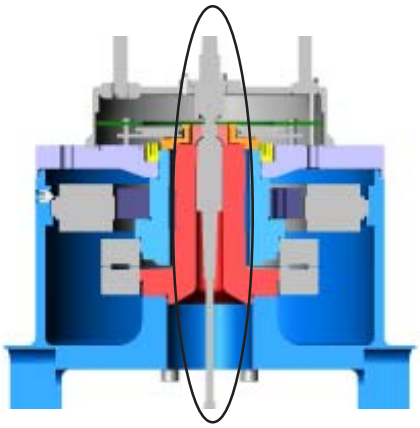
Fiberoptic Systems, Inc.
LIGHT FOR CUSTOM APPLICATIONS

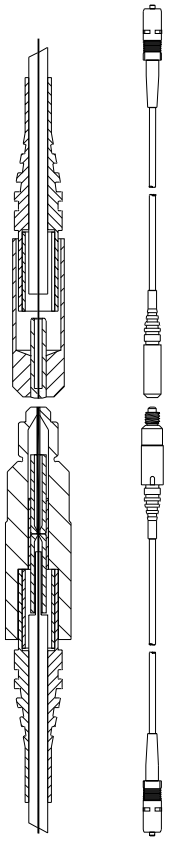
Application note 101: fiberoptic slipring

This note describes a fiberoptic slipring providing a high speed bi-directional data path between a stationary base and a rotating scanner head.

Fiberoptic Systems was invited by the customer to participate in the design and manufacture of a datalink to provide high speed bi-directional data between the base of an 'azimuth' 3D laser scanner and its rotating vertical scanning component with the following features:

- compatible with commercially available WDM bi-directional transceiver modules
- low loss in the gap
- no optical 'hotspots'
- tolerance for radial misalignment





The solution provided by FSI was a custom precision mechanical interface, optically coupling a standard data transmission fiber into a discrete 400 micron integrator, providing excellent transmission characteristics and no particular impositions on the accuracy of the centering. Connectors can be SC/PC or LC/PC or any other connector of choice. A Fiberdyne connector is shown in the diagram.

This concept can be used with various commercially available wavelength division multiplexed high-speed transceiver modules.

For further information and assistance, please contact:

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