

KMM

PRECISION MEASURING

KD-5100+

High Reliability Sensor System for Fast Steering Mirror Control

UPGRADED
VERSION



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KD-5100+ Datasheet 10-8-2026

Product Description:

The KD-5100+ is an upgraded higher reliability version of Kaman's proven KD-5100 measuring system and utilizes the identical hybrid microcircuit. The KD-5100+ incorporates upgrades to: circuit layout, ground connections, and sensor connectors, and adds higher reliability diodes and capacitors. The KD-5100+ retains the performance of the KD-5100 system.

Two precisely matched sensors of a measuring channel are positioned opposite each other on the back of a Fast Steering Mirror (FSM) in two coordinate axes. As the FSM actuators drive the mirror about the center flexure, the mirror moves away from one sensor of an axis and toward the other sensor by an equal amount. The KD-5100+ output signal is used to actively control mirror position.

Applications:

- Laser Communications
- Satellites and Ground Stations
- Directed Energy: Ground, Shipboard, and Airborne
- Image Stabilization Systems



Features & Characteristics:

- Dual channel signal conditioner with two precisely matched sensors per channel
- High bandwidth analog system
- Heart of the system is a Mil-PRF-38534 Class H proprietary hybrid microcircuit
- Designed for thermal and long term stability
- Small package size
- Low power consumption
- Isolated signal and chassis grounds
- Suitable for vacuum applications
- Low outgassing components
- Radiation tolerant
- Increased reliability components

Signal Conditional Electronics:

Available in the identical low profile enclosure as the KD-5100. Enclosure finish can be either black paint for low reflectivity or bright nickel finish for lower outgassing.

Sensor Configurations:

The KD-5100+ utilizes the same high performing sensor configurations as in the KD-5100 system.

Model 15N:

Measuring Range to
 ± 0.035 inch (± 0.9 mm)



Model 20N:

Measuring Range to
 ± 0.075 inch (± 1.9 mm)



Custom Configurations:

Sensor and signal conditioner packaging can be customized for unique requirements.

Manufacturing Capabilities:

- Assembly to IPC-A-610 Class III
- Component Traceability (Lot Code/Date) available
- Complete EIDP development upon request
- ISO 9001:2000 certified facility

