



kSA RMAT: Rotational Monitoring And Triggering

Direct Coupled Hardware for Sample Analysis During Rotation

The Rotation Monitoring and Triggering (RMAT) product was developed by k-Space to meet the needs of scientists and engineers who desire an accurate, programmable trigger source coupled to a rotation stage during thin-film deposition or most any process with sample rotation. With the RMAT, the user can program precise trigger positions during rotation with 12-bit resolution, and use these triggers to initiate external events such as the acquisition of analytical images or other optical metrology at specific rotation angles.



Features

- Single dialog, windows-based software with integrated help manual permits easy access to the functionality of the encoder.
- The encoder is equipped with a programmable logic controller (PLC) allowing positions to be programmed on the fly while the shaft is rotating.
- Select up to 4 different trigger positions with precision to 0.088 degrees (12-bit) out of the full 360 degrees of rotation.
- Trigger output is TTL-level and accessible though the encoder cable.
- The trigger pulse width is programmable and can be set in the range of 1-255 msec.
- k-Space can supply (optional) a custom shaft couple and encoder mounting plate upon request.

Simple Software and User Interface

The screenshot shows the kSA RMAT (Ver 3.06) software interface. It includes an 'Encoder Selection' dropdown, 'Encoder Settings' for four triggers (Trigger 1-4) with fields for Enable, Initialize, Position (counts), Tolerance (counts), and Pulse Width (msec), and buttons for 'Write To Encoder'. It also features 'File Operations' (Load/Save Settings), 'Encoder Position' (Read, Raw, Zero Adjusted), and 'Zero Encoder' (Set Manually, Use Current, Zero Encoder) sections.

Your partner in thin-film metrology

k-Space Associates, Inc., is a leading supplier to the surface science and thin-film technology industries. Since 1992, we've delivered the most advanced thin-film metrology tools and software thanks to close collaboration with our worldwide customer base.