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(57) Abstract :
The invention discloses a device for real-time monitoring of shaft torque in motors, comprising a shaft (1), sensor assembly (2), signal conditioning unit (3), processing and calibration module (4), wireless transmitter (5), and monitoring interface (6). The device utilizes magnetoelastic or alternative sensing principles to measure torque continuously under dynamic loads. Processed torque data is transmitted wirelessly for monitoring and predictive maintenance. The invention provides accurate, compact, and non-intrusive torque measurement, enhancing motor efficiency, safety, and integration with Industry 4.0 frameworks.

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