



AUTOMOTIVE PARTS FACTORY USES EMPRS FOR PROACTIVE CONVEYOR BELT MAINTENANCE

Challenge:

An automotive parts factory relies heavily on conveyor belts to move parts throughout the production process. Unexpected breakdowns can cause significant production stoppages, leading to missed deadlines, lost revenue, and frustrated customers. Traditional maintenance schedules might miss early warning signs of impending motor failure.

Solution: The factory implemented Motor Protection Relays (EMPRs) for their conveyor belt motors. EMPRs are intelligent devices that continuously monitor motor current in real-time.



This allows for:

- **Early Detection of Bearing Wear:** Increased current draw can be a sign of increased friction, often caused by bearing wear. EMPRs can detect these subtle changes before they progress to catastrophic failure.
- **Preventive Maintenance:** With early warnings from EMPRs, maintenance can be scheduled proactively, replacing worn bearings before they cause motor damage or breakdowns.
- **Reduced Downtime:** By addressing problems before they become critical, the factory minimizes unplanned downtime and keeps production lines running smoothly.



AUTOMOTIVE PARTS FACTORY USES EMPRS FOR PROACTIVE CONVEYOR BELT MAINTENANCE

Benefits:

- **Improved Production Efficiency:** Early detection of motor issues prevents unexpected breakdowns and keeps conveyor belts operational.
- **Reduced Maintenance Costs:** Proactive maintenance based on real-time data is more efficient than fixed-interval schedules. Replacing worn bearings before complete failure is less expensive than repairing or replacing damaged motors.
- **Enhanced Equipment Lifespan:** By addressing problems early, the factory extends the lifespan of conveyor belt motors, reducing overall equipment replacement costs.

Implementation:

- Installing EMPRS on existing conveyor belt motors is a relatively simple process.
- The EMPRS can be configured to monitor specific current thresholds and send alerts when pre-defined limits are exceeded.
- Maintenance personnel can be trained to interpret the data provided by the EMPRS and take appropriate action.

Conclusion:

By implementing EMPRS for conveyor belt motor protection, the automotive parts factory achieved significant improvements in production efficiency, reduced maintenance costs, and extended equipment life. This case study demonstrates the value of real-time condition monitoring for proactive maintenance in industrial settings.