Ciyes Systems Pvt Ltd®

IoT based Electronic Point Machine

About Us

Ciyes Systems Private Limited is a product engineering solutions company with a proven track record of offering technological solutions to diverse industries, such as semiconductors, constructions, automobiles, avionics, railways and medicine through AI-based embedded technologies.

About Product

A Point machine rotor facilitates the movement of a train from one track to another, enabling it to switch track efficiently. The point machine rotor is a crucial part of this mechanism, responsible for moving the points (rails) to either align with the mainline or divert the train onto a branch track.

The motor is the driving force of the point machine rotor. It is usually an electric motor responsible for moving the points. When activated, it drives the rotational movement required to switch the points between positions.

So this IoT based Electric point machine solution is integrated inside point machine which gives the mechanical verification for point movement in both forward and reverse condition and also feedback/status of completion of motor movement.

Key Perks

Deep Learning

Our Point Machine employs cutting-edge deep learning algorithms to monitor and adjust railway switches. This intelligent technology minimizes human intervention, drastically reducing errors and enhancing overall operational efficiency.

Real-time Insights

Unlock real-time insights into switch positions, track conditions, and operational status. Our solution facilitates remote monitoring, allowing for immediate responses to any issues and minimizing disruptions to railway operations.

Predictive Precision

Embrace the IoT advantage with predictive maintenance powered by deep learning. Detect potential faults before they impact operations, leading to reduced maintenance costs and the prevention of unexpected failures.

Safety Redefined

Our innovation lies in ensuring the safest route configurations, mitigating potential collisions and derailments. This prioritization of passenger and crew safety is coupled with a substantial reduction in operational risks.

Product Highlights

Operational Excellence

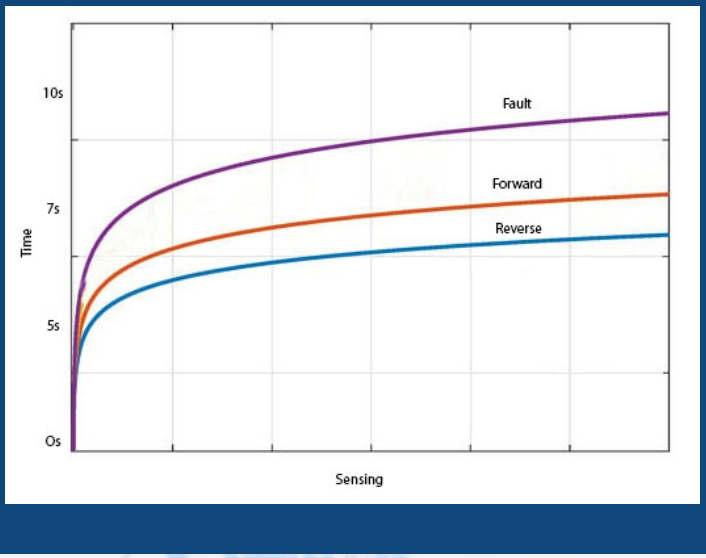
Experience streamlined switch adjustment procedures and minimized operational delays, resulting in optimized traffic flow and unmatched operational efficiency.

Cost Efficiency

Our solution's predictive maintenance and resource optimization mechanisms translate into reduced maintenance costs, ensuring optimal utilization of the operational budget.

Reliability Elevated

Harness the prowess of deep learning to diminish errors, thereby minimizing service disruptions and elevating the overall reliability of the railway system.



Data-Driven Approach

Embrace the strategic advantage of data analytics for well-informed decision-making, empowering your operational planning and resource management strategies.

Seamless Integration and Scalability:

Our IoT Based Point Machine seamlessly integrates into the current railway infrastructure, accommodating both regional networks and expansive setups. Our modular solution effortlessly adapts to current needs, ensuring a smooth installation process.

Precision Through Sensor Technology

Point machine system generally is prone to delays, errors, and even safety concerns, while operating manually, as there are various factors involved such as mechanical operations, electrical circuits and environmental behaviours.

Our solution transforms this landscape by harnessing sensor-fusion technology, creating a seamless error-detection framework across the point machine's operational range. Strategically positioned sensors acquire readings that distinguish forward and reverse movements, as well as potential faults. When sensor readings endure beyond the desired timestamp, the system recognizes as faults, prompting maintenance alerts. This streamlined methodology ensures meticulous monitoring and potent maintenance strategies, transforming point machine operations.

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