PTSPS120 Roller Belt Temperature & RPM Monitoring

Product Overview

The PTSenR™ PTSPS120 Roller Belt Temperature & RPM Monitoring Sensor is a cutting-edge solution designed to tackle roller bearing failures and fire hazards in transportation systems. As the demand for reliable transportation increases globally, industries like ports and mines require stable and efficient transport mechanisms.

Belt transportation has become essential but brings challenges such as roller malfunctions and overheating, particularly in remote or hard-to-reach areas. The PTSPS120 sensor offers real-time monitoring of roller status, collecting RPM speed and temperature data and transmitting it wirelessly to a central system. This allows for proactive maintenance and prevents failures, ensuring safe and efficient operations. Additionally, it offers long transmission distances, ensuring comprehensive coverage and reliable data communication.

System Architecture

Tablet PC · Workstation · Mobile Phone

Vision Eye™

4G / ETHERNET — Area 3

4G / ETHERNET — Area 2

4G / ETHERNET — Area 3

Applications

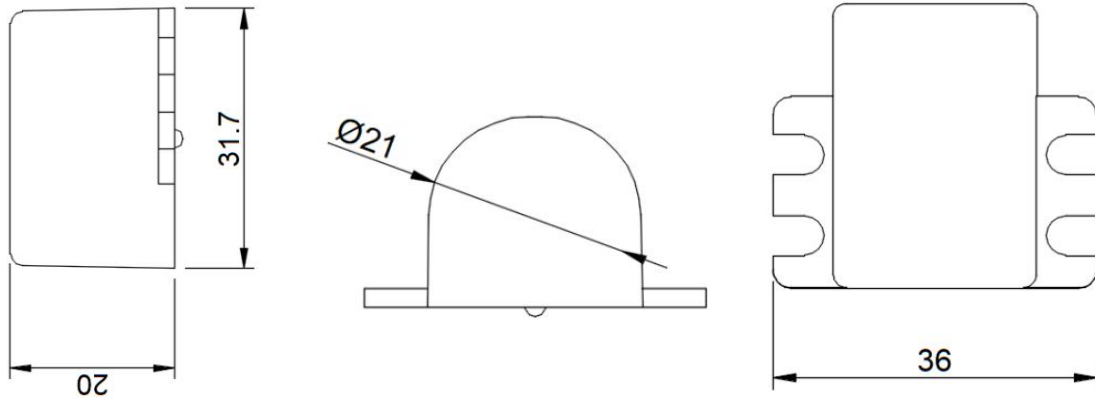| Mining Belts	Travelator	Operational Integrity of Conveyor Systems

Characteristics

The PTSenR™ PTSPS120 sensor excels in real-time monitoring, continuously tracking rotational RPM speed and temperature to detect anomalies instantly. It features wireless data transmission, eliminating the need for manual inspections and providing remote, automatic updates. Utilizing energy harvesting technology, the sensor operates without an external power source or battery by converting the roller's motion into electrical energy. This robust and maintenance-free device boasts strong anti-interference capabilities and an IP68 protection grade, ensuring durability. Enhanced safety measures include flame retardant materials rated V0, making it ideal for high-risk environments. Its compact design allows for versatile installation methods, either screwed at the rail or bundled, making it suitable for various applications. The PTSPS120 functions effectively in extreme conditions, withstanding a wide temperature range and high humidity levels.

Dimensions

(Unit: mm)

Specifications

Power Supply Input Voltage	Energy Harvesting
Working Environment	-40～85℃
Relative Humidity	≤ 95% RH
Temperature Measuring Range	-40℃ ~ 125℃
Measurement Accuracy...	±1℃
Measuring Method	RPM Speed Range
Speed Range	5~16 rad/s
Rotational RPM Speed Accuracy	±1 rad/s
Measurement Intervals	7 minutes
Contracting Intervals	7 minutes
Operating Frequency Band	433.92 MHz
Transmit Power	10 dBm
Transmission Distance	≤300m (Open Space)

Protection Grade	IP 68
Flame Retardant Grade	V0 (700℃ 30sec)
Installation Method	Screw at Rail or Bundle Type
Certifications	EN 61000-6-2:2005+AC, EN 61000-6-4:2007+A1:2011; EN 62366-1:2014+A11:2017;

Ordering Information

Part Number	Product Description
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