ZT-GMS-T100 Mine Electronic Tags (read and write)

introduction

(Patent)

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Overview

Mining Electronic Tags are patented products of our company is specialized personnel for the positioning and design of underground electronic label.

The Electronic Tags based MingJia completely independent intellectual property rights RFID technology, in order to take the initiative to launch the form of information to the reader, with ultra-low power, long-range, anti-collision, interference, data security and superior performance, such as identification of high-speed, on the role of the body without any radiation.

ZT-GMS-T100 has read and write functions at the same time. ZT-GMS-T100 has radio, emergency call functions, has applied for a patent.

Unique anti-seismic features, can be fully adapted to the mine under the harsh environment of the location of underground personnel, monitoring and disaster relief work accident played an effective role in promoting.

Technical parameters

1. Electrical Characteristics

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quiescent current</td>
<td>Less than 2μ A</td>
</tr>
<tr>
<td>Current</td>
<td>Less than 15mA</td>
</tr>
<tr>
<td>Battery life</td>
<td>3-5 years (life of 20 years)</td>
</tr>
</tbody>
</table>

2. Characteristics of microwave links

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal modulation</td>
<td>GFSK</td>
</tr>
<tr>
<td>Communication rate</td>
<td>Two-way 1024Kbit / s</td>
</tr>
<tr>
<td>Operating frequency</td>
<td>2.45GHz</td>
</tr>
<tr>
<td>Maximum output power</td>
<td>0dbm</td>
</tr>
<tr>
<td>Bit error rate</td>
<td>10^-9</td>
</tr>
</tbody>
</table>

3. Physical Characteristics

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Case Material</td>
<td>ABS plastic high-temperature modification</td>
</tr>
<tr>
<td>Label type</td>
<td>Read-only type/Reading and writing type</td>
</tr>
<tr>
<td>Appearance</td>
<td>65×48×19mm</td>
</tr>
<tr>
<td>Weight</td>
<td>25 grams</td>
</tr>
<tr>
<td>Color</td>
<td>Black</td>
</tr>
<tr>
<td>Protection level</td>
<td>IP34</td>
</tr>
<tr>
<td>Installation</td>
<td>Hang, Wear or Placing it inside of a helmet</td>
</tr>
</tbody>
</table>

4. The working environment

1) The operation of the various sources of interference at the scene there are no special requirements

2) Operating temperature: -30 ℃ ~ +65 ℃
3) Working humidity: less than 85%

4) Storage temperature: -40 °C ~ +80 °C

5) Vibration: 10 ~ 2000 Hz, 15g three axis

6) Anti-electromagnetic interference: 10V / m 0.1 ~ 1000MHz AM electromagnetic AM

Features

※ Distance: effective identification of a range of up to 2-50m, adjustable.
※ Conflict prevention: The advanced anti-collision technology, can identify 200 / s and above logo.
※ High speed: the highest recognition rate of up to 200 km / hr.
※ Security: encryption algorithm and authentication to ensure data security, to prevent eavesdropping and data-link to break.
※ Direction: the direction to achieve the recognition and non-directional.
※ Cost: All of the chips used 0.18uM lower costs.
※ Power consumption: the ultra-low power consumption, healthier and more secure.
※ Transmission: the global open microwave ISM band, there is no need to apply and pay.
※ High anti-interference: a variety of interference sources on the scene without special requirements
※ Suitable for the use of coal mine

Working Principle

Active Tags proactive continuous radio signals sent out (1 second to send 3 times the transmission power can be modified according to user requirements), and to long distance transmission, the wireless signal is encoded, each label code is unique. Tags issued by the wireless signal if it is in the reader with an effective measuring range, the wireless signal through the antenna on the reader by reader receive and decode, and then by bus TTL232/RS232/RS485/CAN bus/ Ethernet net / Wiegand-26 / Wiegand-34/USB/GPRS interface will be sent to the management information system or other monitoring system.

Caution

1. Tags keep the surface dry.

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2. Do not put it where the metal more.

3. Do not put it in a confined space.

4. Do not put it in the vicinity of corrosive substance.

5. Please work in its normal use temperature and humidity.

6. Overhaul product components are not free to change the parameters, specifications, models.

**Apply**

- Tunnel Safety Management System
- Coal mine management personnel positioning system
- Hands-free car park access control of vehicles;
- Driving School Exam System
- Vehicle Electronic License Plate Recognition System;
- ETC electronic toll highway system;
- Bus stops into and out of automatic management system;
- Home-school communication, SMS students safe and out of the school system;
- Important meetings and activities reported meeting system
- Personnel from enterprises automatic attendance system;
- Pet tracking and management of cities;
- Tracking and management of wild animals;
- Zoo Management;
- Inspection of electrical equipment storage;
- Gas pipeline, transformer equipment, intelligent maintenance;
- Tracking high-value-added products;
- Factory production line process management;
- Tray storage containers such as tracking and management;
- Shipping, water transport, road and rail transport of containers