

A person in silhouette stands on a rocky ledge, looking out over a vast, sunlit landscape. The sun is low on the horizon, creating a strong glow and long shadows. The person is wearing a hard hat and a dark jacket. The background shows a rugged, rocky terrain with a bright sun low on the horizon, creating a strong glow and long shadows.

MINE

SAFE

SURFACE MISSING PERSON LOCATOR SYSTEM

KNOWING WHERE YOUR PEOPLE ARE WHEN IT MATTERS MOST

BY MINE SAFE GLOBAL

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ABOUT MINE SAFE GLOBAL

THE CORE SAFETY SYSTEMS MINING OPERATIONS RELY ON

Our solutions include an integrated range of technologies engineered to safeguard operators, infrastructure, and underground personnel.

Our expertise is built on years of hands-on experience across diverse mining environments. We work closely with each client to understand their unique site conditions, challenges, and objectives. This collaborative approach allows us to deliver tailored, intelligent solutions that safeguard your workforce, protect your assets, and enhance operational performance.

THE PRINCIPLES THAT GUIDE US

We listen, adapt, and respond with solutions shaped around your operational goals.

PEOPLE

We believe people matter, and what we do is grounded in relationships that foster trust and respect.

INTEGRITY

We operate with transparency, accountability, and honesty in everything we do.

INNOVATION

We continuously develop new technologies that keep our clients ahead of emerging risks.

RESPECT

We treat every individual and partner with dignity and professionalism.

EXCELLENCE

We deliver quality solutions that meet the strictest standards of performance and safety.

COLLABORATION

We work hand-in-hand with our clients and relevant industry leaders to understand their needs and deliver tailored outcomes.

All of our collision avoidance solutions are proudly designed and developed in South Africa, reflecting our commitment to local innovation and proven reliability.

COMPLIANCE & WORKFORCE SAFETY SYSTEM

OVERVIEW

These systems ensure regulatory compliance and complete personnel accountability, meeting stringent mining safety standards while eliminating human error in critical safety processes.

MINE SAFE SURFACE MISSING PERSON LOCATOR SYSTEM

Ensures compliance with Section 16.7 of the Mine Health and Safety Act through real-time personnel tracking, autonomous missing-person detection, and last known location (LKL) preservation.

In the event of an emergency or when an individual cannot be accounted for, the system enables rapid location identification through GNSS positioning, dramatically reducing search and rescue response times and potentially saving lives.

- ✓ **All-Environment Coverage:** Functional across all surface mining environments.
- ✓ **Last Known / Current Location:** Last known location OR live current location tracking.
- ✓ **High Precision GNSS:** Industry-leading GPS accuracy for reliable personnel tracking.
- ✓ **Reporting:** Autonomous reporting with pre-configured or ad-hoc georeferenced functions.
- ✓ **Regulatory Compliance:** ISO 21815-compliant, supporting full personnel accountability standards.

MHSA SECTION 16.7 COMPLIANCE

The Mine Safe Surface Missing Person Locator System is designed to ensure full compliance with MHSA Section 16.7 and equivalent international personnel accountability regulations, providing continuous, auditable real-time and last known location data for every worker on site.



Live personnel tracking dashboard . Real-time and last known location view.

MINE SAFE SURFACE MISSING PERSON LOCATOR SYSTEM

OVERVIEW

Rapidly locates missing personnel on surface mining operations through advanced RF tracking technology, ensuring swift emergency response and personnel accountability.

The system delivers real-time personnel location visibility and complete workforce accountability across surface operations. Every active tag is continuously monitored, with last known location (LKL) preserved in the event of signal loss, meeting MSHA Section 16.7 and equivalent international personnel tracking regulations.



HOW THE MPL SYSTEM WORKS

MISSING PERSON DETECTION & IDENTIFICATION

Autonomously identifies when personnel may be missing or unaccounted for, providing last known location or live current location tracking for rapid emergency response.

GPS-EQUIPPED TAGS & SHIFT-RELIABLE BATTERY LIFE

High-precision GNSS-equipped PTU tags deliver industry-leading location accuracy, optimised for 16–24 hours of continuous operation through extended shifts and emergency search scenarios.

REAL-TIME LOCATION VISIBILITY & BEACON ARCHITECTURE

Strategic Beacons receive data from worker-worn PTU tags via the M2M/M2P network, providing real-time personnel tracking, movement replay, and geofencing through a cloud-based platform.

RED ZONE ACCESS CONTROL & CAS/CPS INTEGRATION

Personnel can only access high-risk areas with functional, charged pedestrian tags, with seamless data transmission to collision avoidance and collision prevention systems for unified site-wide safety.

THE TECHNOLOGY BEHIND THE SYSTEM

- ✔ **GPS-Equipped Tags:** High-precision GNSS technology provides industry-leading GPS accuracy for reliable personnel tracking across all surface mining environments.
- ✔ **Real-Time Personnel Tracking:** Continuous monitoring of all personnel locations across the mining site using PTU pedestrian tags.
- ✔ **Site-Wide Coverage:** The RF network delivers comprehensive coverage across open-pit and plant areas using beacons, without relying on cellular or WiFi networks.
- ✔ **Missing Person Identification:** System autonomously identifies tags that are not updating their location and alerts control room personnel for immediate action.
- ✔ **Cloud Database Management:** Central cloud database enables real-time access through web user interface from on-site control rooms or off-site workstations.
- ✔ **Rapid Emergency Response:** Immediate location identification of missing persons reduces search time.
- ✔ **CAS/CPS Data Transmission:** PTU tag location data is transmitted directly to the site's collision avoidance and prevention systems, giving vehicle operators real-time awareness of pedestrian positions across the operation.

NEXT-GENERATION PTU TAG: WHAT'S NEW

- ✔ **Separate Radio Network:** Dedicated MPL tag using a separate radio network for data transmission to on-site beacons. Independent of CAS/CPS infrastructure.
- ✔ **Extended Battery Life:** New tag with 48+ hours battery life — more than double the previous generation's 24-hour capacity.
- ✔ **Small & Unobtrusive Form Factor:** Compact, lightweight design that is comfortable for workers to carry throughout their shift.
- ✔ **Emergency Call Function:** Built-in emergency call capability enables workers to signal distress directly from their tag.
- ✔ **Cost-Effective:** Designed for widespread deployment at a cost-effective price point for maximum safety reach.

COMPLIANCE & CERTIFICATIONS

Mine Safe Global solutions meet the highest regulatory and technical standards required across the mining sector.



IP Certified

Equipment has been tested to comply to the required standards, ensuring long-term durability and safety compliance.



ICASA Certification

All products are officially approved by the Independent Communications Authority of South Africa, ensuring legal operation and reliability.



EMI & EMC Compliance

Confirms that collision avoidance systems meet all relevant electromagnetic interference and compatibility standards.



Chief Inspector of Explosives

Our technology complies with the standards set by the Chief Inspector of Explosives, meeting strict regulatory requirements for safe operation around explosive zones.



MTEEx Certified

Our systems are MTEEx certified, ensuring explosion-prevention compliance for safe operation in hazardous areas.



Mine Health & Safety Act

Enables our customers to comply with the South African Mine Health and Safety Act (Act 29 of 1996).

END-TO-END SUPPORT

We provide complete end-to-end solutions, handling everything from initial site assessment and system design to installation, testing, commissioning, and handover.



INSTALLATION & CONFIGURATION

Systems are installed and configured to match your site requirements, ensuring seamless integration with existing site infrastructure.



TRAINING

Practical training to equip operators with the knowledge to safely and confidently use the system.



MAINTENANCE

Regular inspections and servicing to maintain reliability, prevent failures, and ensure ongoing compliance



TECHNICAL SUPPORT & ASSISTANCE

Fast-response troubleshooting and technical help to reduce downtime and keep operations running smoothly.



CONTACT DETAILS

NEVER LOSE TRACK OF YOUR WORKFORCE. ASK US HOW.

Request a demonstration, and a Mine Safe Global expert will be in touch to provide the right solution for your operation.



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REGIONAL & INTERNATIONAL PRESENCE

We operate across Southern Africa and serve mining operations in strategic international markets around the world.



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