

# JOYGLOBAL

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## Smartzone Proximity System





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The Joy Smartzone Proximity System is a user awareness product that helps teach personnel to interact with equipment from safe working zones.

### Teaches personnel safe working zones

Its unique ability to individually recognize and monitor personnel movement around the machine provides an additional layer of analysis for in depth training initiatives.

### Operation

The operation of the Smartzone Proximity System is based on electromagnetic principles. The system has two basic components. The first is a group of drivers that are strategically positioned on the equipment. Each driver is embedded in a sturdy metal frame and then shielded with several inches of polycarbonate to help protect it from damage. The second component is a personal wearable device (PWD) about the size of a typical cell phone that can be worn by section personnel who work in close proximity to equipment. The drivers emit an electromagnetic signature that is identified by the PWDs, allowing the Smartzone Proximity System to identify multiple personnel in the vicinity of the machine.

The Smartzone Proximity System maintains operating zones around the equipment, which operating zones can be uniquely tailored to the equipment. Zone one acts as the initial warning zone and signals a person who is wearing a PWD when the wearer is getting too close to the equipment. Zone two is smaller, and functions as the shutdown zone that disables various machine functions when it detects a person wearing a PWD in that zone. The Smartzone Proximity System uses different zone shapes depending on the machine operation and personnel roles.

### Notice

The Joy Smartzone Proximity System is intended to help teach personnel to operate a continuous miner from safe working zones, and to otherwise stay clear of danger zones. It is not intended to replace training and safe operating practices; rather, it is a useful tool to assist in training personnel.



### Features

#### Full plug-n-play capability

All Smartzone Proximity System components are installed in a manner that allows for easy change-out. If a component fails, it can be swapped out for a new one, with no reprogramming necessary.

#### Equipment specific zone configurations

Smartzone Proximity System's zone configurations are tailored to both individual equipment shapes and the roles of individual mine personnel. Whether the equipment has hard corners or radii, the Smartzone Proximity System's unique ability to conform its zone reduces nuisance warnings and shutdowns. The system also has the ability to assign preset zones to mine personnel based on roles and requirements.

#### Diagnostic and configuration kits

The Smartzone Proximity System Diagnostic Tool Kit (part number 100847804) allows customers to have access to the Smartzone Proximity System to perform in-depth diagnostics. The kit includes a laptop with read-only software, allowing trained personnel to view proximity system configuration and monitor the system in real time (in fresh-air areas only). The kit may be utilized to connect to the Smartzone Proximity System wirelessly or via a hardwired connection using the included laptop.

The kit includes an eLearning training module for the proximity diagnostic software, component change-out, and antenna cable inspection.

The Smartzone Proximity System Zone Configuration Kit (part number 100834442) includes all of the above, along with the zone configuration software, which allows for shutdown and warning zone modifications within prescribed limits.

#### Faceboss integrated

Troubleshooting the system is quick and easy when the Smartzone Proximity System is integrated with Faceboss. Dedicated screens and alarms allow operators to evaluate system health and performance.

#### Machine integrated drivers

The system's drivers are strategically incorporated into the machine to help protect them from damage. No drivers are mounted above machine covers. Extra thick polycarbonate covers are used as an added layer of protection.

#### Joy service and support

All Smartzone Proximity Systems are backed by Joy's field service technicians and extensive distribution network.

### Personal Wearable Device (PWD) Intrinsically safe...

The Locator is a device that is worn by personnel on the working section. It is MSHA-approved, intrinsically safe, and is self-powered by a rechargeable internal battery.



### PWD specifications

MSHA certification number	18-A13003-0
PWD size	2.63" x 4.61" x 1.53"
PWD weight	13 oz.
PWD battery life	18 hours
PWD charging time	8 hours
Size of charging station	6 PWD

### Charging and Testing

Charging racks are available to hold up to 10 charging stations to minimize footprint. A touch screen based locator test station allows for rapid testing of the locators prior to taking them underground.



Joy Global worldwide locations

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