



Proximity Detection Systems for underground Coal Mines

PDD

Weighs 0.43 Lb



XP-BOX weighs 12.8 Lbs



LG weighs 0.46 Lb



MF4 weighs 1.8 Lbs



Nautilus has been designing and manufacturing proximity systems for metalliferous mines for more than 13 years. Nautilus has been designing proximity systems specifically for coal-mines since 2002 and has two different types of Coal-Buddy systems which are MSHA approved. The latest one lets an Operator work **close** to his Continuous Miner (CM) so that his normal, safe, operating routine does not have to be changed.

However, if an operator moves close to a danger point his small, light Proximity Detection Device (PDD) will continuously flash a red light, warning him to immediately stop the CM or move to a safer location. A photo of the PDD is shown on the left side of this page.

When an operator's PDD is detected inside a red-zone then the Coal-Buddy will turn off the large green light on the CM to let him know that it has disabled the Tram and Conveyor Boom-Swing functions. The CM will remain disabled with the green light off until he has moved to a safe area. This makes it very easy to understand because it's just like a traffic light, Green Light = safe to continue.

An advantage of the Coal-Buddy is that when the equipment and cables have been installed on the CM, you can't see any of it. The top of the CM will remain as it was with nothing sticking up above the deck. The same is true at the sides of the CM, nothing sticking out and everything installed where it won't be seen or damaged

This is only possible because the unique Nautilus MF4 magnetic-field Radiator is small enough to fit in your hand and only weighs 1.8 Lbs as shown in the picture (left). Each MF4 is extremely rugged and can be submerged in water for long periods without sustaining any damage.

Because there are different sized CM's and different operational requirements Nautilus has made each of the 15 detection-zones around the CM fully adjustable. It takes less than a minute to change a detection-zone to suit the customer's requirements. The person making the change does not have to touch the CM or even be close to it. The Little Genius (LG) uses radio commands to change the detection-zone so all the user has to do is push a few buttons. The LG is small, light and will fit in a shirt pocket.

For those people who want to check or test the system using the LG, no security code is required so anyone can use it. It only takes a few minutes to learn how to check the Coal-Buddy system. However, for security and safety reasons, anyone who wants to *change* a detection-zone will first have to know the correct 'Security Access Code' and how to use it.

Installation - Because the Nautilus Coal-Buddy components are so small they can be easily packed into a convenient, compact box for transportation to the mine. It usually takes only one shift to install a complete system and also train some of the miners. Note: the LG must only be used in fresh air zones.

Coal-Buddy Proximity Detection System for methane-gas coal mines.

United Central Supply is the exclusive dealer in the USA for Nautilus Coal-Buddy Systems and associated products. UCS has 28 branches in 12 states to serve our customers. If you have any questions please contact your local branch of United Central or Product Manager, Harry Dushac at: hdushac@unitedcentral.net

United Central Industrial Supply Company,
1241 Volunteer Parkway, Bristol, TN 37620.
Telephone: 423-573-7300 Fax: 423-573-7392
www.unitedcentral.net

Nautilus International has designed and manufactured a wide range of products for the mining industry for more than 32 years. These products include Radio and Tele-Remote Control Systems, Proximity Detection Systems and Automated Guidance Systems for underground mining vehicles. If you have any technical questions please contact Jason Hart: jason.hart@nautilus-intl.com

Nautilus International Control & Eng. Ltd.,
6866 Russell Ave, Burnaby, B.C. Canada. V5J 4R9
Telephone: 604-430-8316 Fax: 604-430-1962
info@nautilus-intl.com
www.nautilus-intl.com