

AMR PEMCO offers a diverse and versatile line of products for the global mining, oil and gas, aggregates, utilities, and tunneling industries. Using new technology to meet the growing needs of our customers, we deliver reliable and cost-effective solutions that enhance safety, reduce downtime, lower operating costs, and increase efficiency.



Mine Net™ Mesh is an IEE 802.11 open protocol platform that supports voice and text communications, personnel and vehicle tracking, atmospheric monitoring, and continuous data communications such as video or third party systems. Designed for underground, surface, or industrial environments, the system improves productivity, emergency communications and personnel location, and facilitates critical aid for search and rescue efforts. The original Mine Net™ system is still available as a lower cost alternative utilizing hard line connections for zone-based tracking and text communications.

# **Communications & Tracking**

The Collision Avoidance Protection System (C.A.P.S.) utilizes the same two-way synchronous ranging technology as our Mine Net™ Mesh precision tracking, allowing the two systems to interface with each other if desired. Solutions are available for vehicle-to-vehicle and vehicle-to-person, with up to four (4) sensors per machine and two detection zones for warning and alarm. Options include: audio/visual alarms, brake relay modules, remote antennas, customized alarms per sensor, user defined distances for each sensor or detection zone, on-board data logging for incident investigation, and temporary settings for reduced nuisance alarms.



### **Collision Avoidance**



The MC-4210 and MC-6415 series of gas monitors are self-contained units offering a wide range of sensors for commonly encountered mine gases such as CO,  $CO_2$ ,  $CH_4$ ,  $O_2$ ,  $H_2S$ , NO,  $NO_2$ ,  $SO_2$ , and more. The 6415 supports up to four sensors in a single enclosure and all versions have some of the best current draw, setup, and calibration of any monitors on the market. Options include multiple communications protocols including Wi-Fi, 4-20mA current loop, or stand-alone for local display. Units are also available specifically for Diesel Nullifying applications.

# **Atmospheric Gas Monitoring**

Our patented MC-6415 Smoke Sensor provides real-time monitoring for smoke and fire conditions. The unit offers communications such as Wi-Fi via Mine Net™ Mesh, or data line communications such as AMR PEMCO's MC-4000 system. Superior detection and reliability are accomplished with a dual-optical sensing chamber and custom designed hardware to eliminate contamination from environmental components such as lime dust. The MC-6415 is ideal for use with today's fire-retardant conveyor belts, and is MSHA-approved as a battery-operated device.



### **Smoke Detection**



**Speed Monitoring** 

The "Little Speedy" LS-3000 series of speed sensors are compact "all-in-one" control switches utilizing a ferrous metal inductive pick up. Target speed detection, delays, and control circuitry are combined into the housing for improved installation, maintenance, and cost. Each model is fully encapsulated for dust and moisture protection and contains integrated adjustment settings for speed cut off and time delay. Units are available in a wide range of options such as 24VDC, 120VAC, Zero Speed, 4-20 mA, Dry Contact, Low and High speed, or pulse type.

The TS-1900 Tip Switches are simple and versatile for detecting levels of stockpiles, storage bins, material spills, or many other applications. Fully encapsulated with no moving parts for enhanced durability, they mount vertically using the integrated eyehook. Models are available with Normally Open or Normally Closed switches, 15 or 30 degree activation, and all versions are rated for 110/220 VAC @ 15 Amps.



Level and Spill Detection



Since 1990 we have designed and delivered over 3,000 custom designed industrial buildings built to client specifications and site conditions in accordance with IBC guidelines. Our structures are all steel construction - mild, galvannealed, and stainless, with optional full service installation and electrical integration of all equipment inside the building. Modular building designs are available for larger projects as well as customized HVAC systems and ancillary components such as steps, platforms, railings, and mezzanines.



# **Industrial Buildings**



AMR PEMCO is a leading manufacturer of underground power centers, underground substations, unitized and skid-mounted surface substations. Specializing in slimline and low-profile designs, we offer MSHA-approved ground monitoring devices, electronic circuit breakers, remote racking systems, mine duty couplers, and many other customer-defined options.

# Mining and Tunneling Power Solutions

For 20+ years AMR PEMCO has manufactured dry-type transformers for 5V to 5000KVA, and up to 25KV primary voltages. We custom manufacture to the OEM or client's specifications, to ANSI/IEEE C57.12 standards, and each unit is mining, tunneling, and industrial-rated. Options include drive-rated, rectifier duty, interphase transformers, reactors and inductors. Designs include air-core or iron-core and custom enclosure manufacturing with integration services available for switchgear, drives, and electrical gear.



## **Dry-Type Transformers**



AMR PEMCO's patented Remote Racking System (RRS) with optional CB-PRO, removes the miner from potential arc flash hazards by only exposing them to 5 Volts, and the built-in time delay allows the miner to safely walk away when energizing a circuit. Customized for any OEM power center, the RRS is designed to be removed and repaired easily. The portable motor attachment allows the RRS to be remotely racked out from up to 30 feet away further safeguarding against arc flash hazards. Solutions are available for 300-600 Amp vaccum contactors, selectable voltages from 480 to 995 VAC, and multiple options for ground monitors, receptacles, or conventional molded case circuit breakers.

# **Remote Racking System**

Ground monitors continuously verify the integrity of the ground conductor found in AC trailing cables. Since 1975, AMRPEMCO has been a pioneer in ground monitor design and has sold over 50,000 circuits. Units are offered in impedance style, our unique "pilotless" approach, and with optional ground fault detection. Models are available for 480V up to 25kV AC in single or multi-circuit configurations.



### **Ground Check / Fault Monitors**



Our electronic circuit breakers offer greater safety than conventional breakers by operating at low voltage and distancing the operator from the circuit itself so that there is no external arcing. They also offer a much longer life of operation than molded case breakers and include indicator lights for all faults: Phase overcurrent, Ground fault, Phase under-voltage, Unit fault, Ground monitor trip, Fuse/contact failure, Phase loss. All protection functions are provided in one complete package. The CB-PRO is capable of remote control by PLC or other data aquisition system.

## **Electronic Circuit Breakers**



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