

Custom Controls for Door Operation (PLC)

American Mine Door® Co. works with and assists every customer to help determine the best solution for your specific application.

We take into consideration the width, height, water gauge, service requirements, budget, and application to offer the most economical and effective solution for your ventilation door needs, including two different door actuation designs. (See Door Actuation Options later in this document.)

Door Control and Actuation Features

The American Mine Door Co. has the ability to design controls to operate your mine door package. After initial review of your specific needs, we will offer the customer a written description of exactly how the control system we design will operate (see attached example). At that time, the customer will review the system operation overview and make any final alterations that they want included. American Mine Door Co. will build the controls in-house, complete a thorough testing of the system, and then complete wiring schematics and installation instructions for the customer.

Control Features:

- NEMA 12/13 enclosure
- Allen Bradley Micrologix 1000 PLC
- Line conditioner in each system
- All Allen Bradley components (relays, terminal blocks, switches, fuse holders etc.)

Available options and programmable logic control packages:

- Door interlock logic – lock out 1 door in airlock to maintain neutral airways.
- Logic for “T’s” and “cross” traffic patterns.
- Lighting systems (green, red and yellow shows traffic conditions).
- Buzzer/ horns for audible alerts.
- Proximity switches to detect vehicles entering doorways, obstructions in pathway.
- Remote control systems via remote transmitters.
- Cap lamp sensors to activate door systems.
- Other custom features requested by customers for unique situations.

Available control activation options:

- Our standard package includes air control system (control box, valve, air cylinders, 17 gallon storage tank, flow control valves).
- Optional hydraulic package includes 1 or 2 or 3 door systems, 20 gallon tank, 3 or 5HP motor, 1 qt. accumulator, 4 way directional valve, pressure relief valve, 700 PSI, tank heater, pressure switch.
- Manual operation with door close- manual lock.

