

basic position control system

Enfield Technologies 35 Nutmeg Drive Trumbull CT 06611 USA

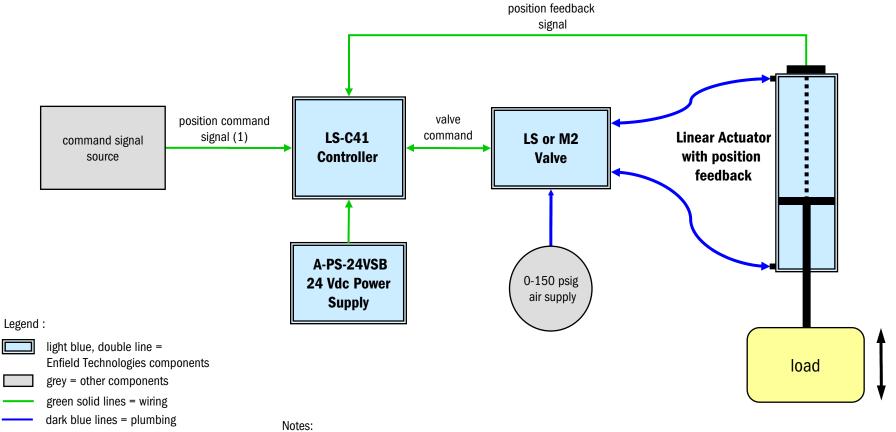
> + 1 203 375 3100 + 1 800 504 3334 toll-free North America

info@enfieldtech.com www.enfieldtech.com

© 2008 Enfield Technologies

# **Basic Position Control System**





yellow = main objective components

(1) Command signals should always be calibrated to actual feedback signal range

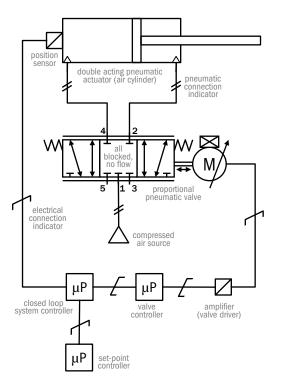
\* All grounds should be common to prevent system anomalies. Consider using a power supply that separately regulates power to the device controller and the sensors



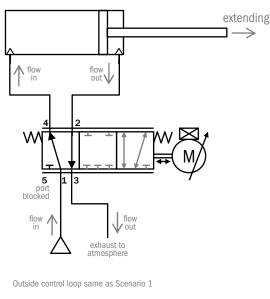
### ISO Valve Diagram Tutorial: Switching in Circuit Diagram

Positioning systems are generally easy to understand

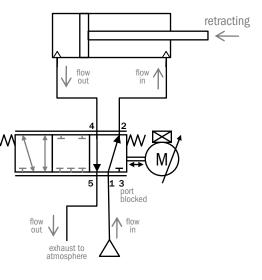
Scenario 1: system at rest in stable state with actuator extended  $2/3\,$ 



Scenario 2: shift valve to extended actuator further



#### Scenario 3: shift valve to retract actuator

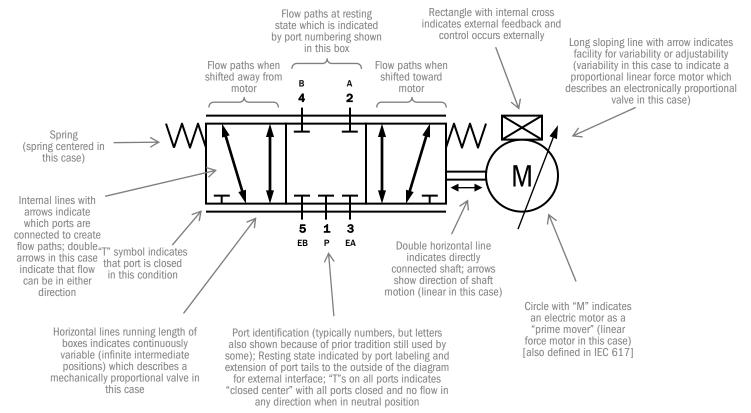


Outside control loop same as Scenario 1

- ISO 1219 symbols are often used in fluid power circuit schematics, specialty design and simulation software, and as symbol libraries for CAD software
- When shown in a simulation of a circuit, the symbol is shifted to indicate its active state as in example
- Example above shows a basic pneumatic positioning system (electronics shown only in initial scenario; unused flow paths grayed-out for clarity)



- ISO 1219 valve diagrams show how the valve functions in its primary states of actuation.
- The location of the port labels indicates the valve's natural neutral state (un-actuated or resting state). (Port labels are typically numbers, but prior industry practice was to use letters that assume use of the valve for a positioning system using a double acting air cylinder.)
- ISO diagrams do not necessarily represent actual construction which may be too complex for logic circuit design purposes. (But in many cases, the ISO diagrams for Enfield Technologies valves are good approximations of actual construction).





## **Contact Information**

#### **Enfield Technologies**

35 Nutmeg Drive Trumbull, CT 06611 USA tel +1 203 375 3100

tel +1 800 504 3334 toll-free North America

info@enfieldtech.com www.enfieldtech.com General Information info@enfieldtech.com

Sales Group sales@enfieldtech.com

Customer Service & Technical Service custserv@enfieldtech.com

