Kinetrol DP3 Positioner

The DP3 is a positioner that is capable of modulating with an external demand signal control (4-20mA or external potentiometer), but which can also function as an ON/OFF device if required to simply drive a valve fully open/closed. It can also be configured to move to a user definable intermediate position without the need for any external demand signal control.

- Fast, smooth and precise control from a digital circuit
- Simple time saving field set up - quick calibration via push buttons and LED status indication
- 3 position operation or 4-20mA modulation
- Resilient to poorer quality air (class 4.5.5)
- Internally enclosed solenoid valves (Models 05—15)
  External solenoid valves (Models 16 - 60)
- Integral, loop powered, angle retransmit is isolated from both demand signal and power supply
- Spring return, double acting fail free, fail hold and fail down options available
- Signal, power and air fail hold options
- Speed control via integrated snubbers
  Fast to end stop and fast positioning options available
- Weatherproof, compact and robust metal housing



Operation

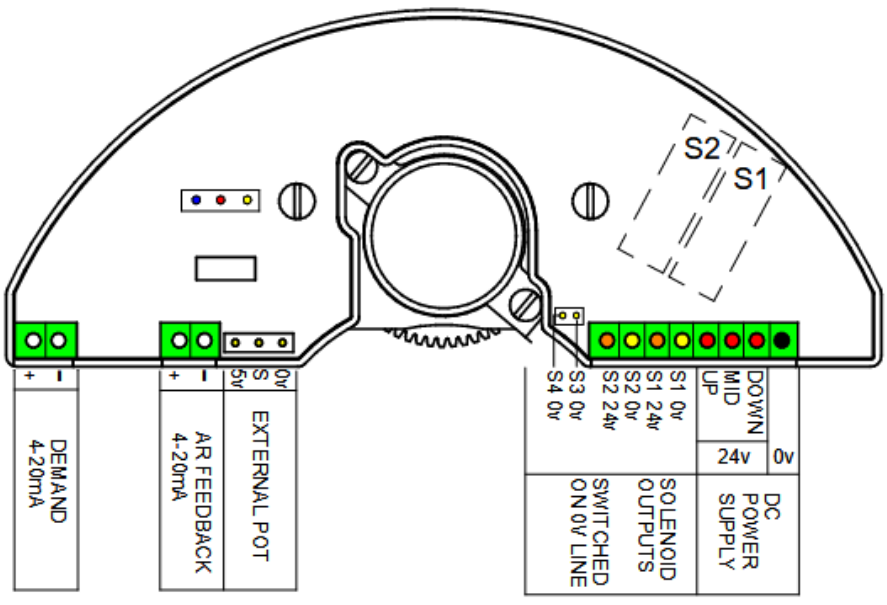
The all-new encapsulated digital circuit has a 3-button digital set up with 12 LEDs providing indication of unit status. It comes with quick set up and precision set up so that the unit can be calibrated to the level of accuracy required for the application. The new circuit offers 24V dc as standard, an additional PCB will allow 100V to 264V ac supply.

When the “UP” terminal is energised, the unit will drive to the 100% end of travel stop. When the “DOWN” terminal is energised the unit will drive to the 0% end of travel stop.
Energising the “MID” terminal activates the positioning function and the unit will drive to the required position demanded by one of the three methods below (selectable in “Installation Setup”):

a) 4 - 20mA current demand loop.
b) Potentiometer voltage.
c) Internal set point (position defined during setup).

When using 4 - 20mA or potentiometer voltage, the “MID” terminal can be constantly energised, with the position being adjusted by altering the 4 - 20mA current or the potentiometer voltage.

Fast to end stop or fast positioning options are available which use additional solenoids to move faster whilst maintaining the positioning accuracy.



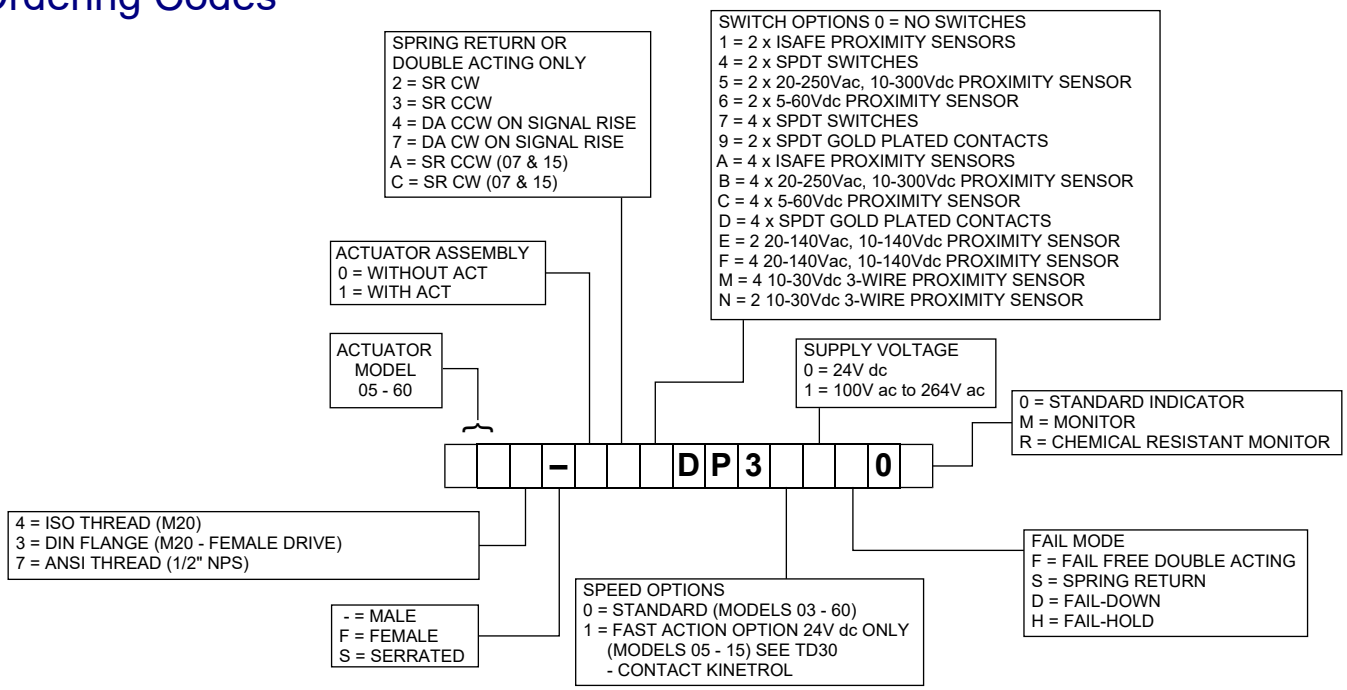
Kinetrol DP3 Positioner

Specification

Actuator sizes	Models 05 to 60
Supply Voltage	24V dc ± 10%
Option:	100V ac to 264V ac, 50 / 60Hz
Power Consumption	Positioner 1.5W max Solenoids 3VA max per solenoid
Operating Temperature Range	-20°C to 70°C (-4°F to 158°F) For alternative temperature options contact Kinetrol
Operating Pressure	3.5 to 7.0 bar (50 to 100 psi)
Air Supply	Must be reasonably clean and dry and to quality class 4.5.5 (ISO 8573.1). This implies 25 micron max particle size, 7°C dew point maximum (or lower than ambient temperature below 7°C) and 25mg/cubic metre maximum oil content.
Speed of Operation (Unloaded - Factory Set) Speed is adjustable with snubbers depending on load Model 16 - 60 using ½" solenoid	Models 05 to 14: 5 seconds Model 15: 10 seconds Model 16: 5 seconds Model 18: 5 seconds Model 21: 5 seconds Model 30: 6 seconds Model 60: 12 seconds Faster operating options are available - contact Kinetrol

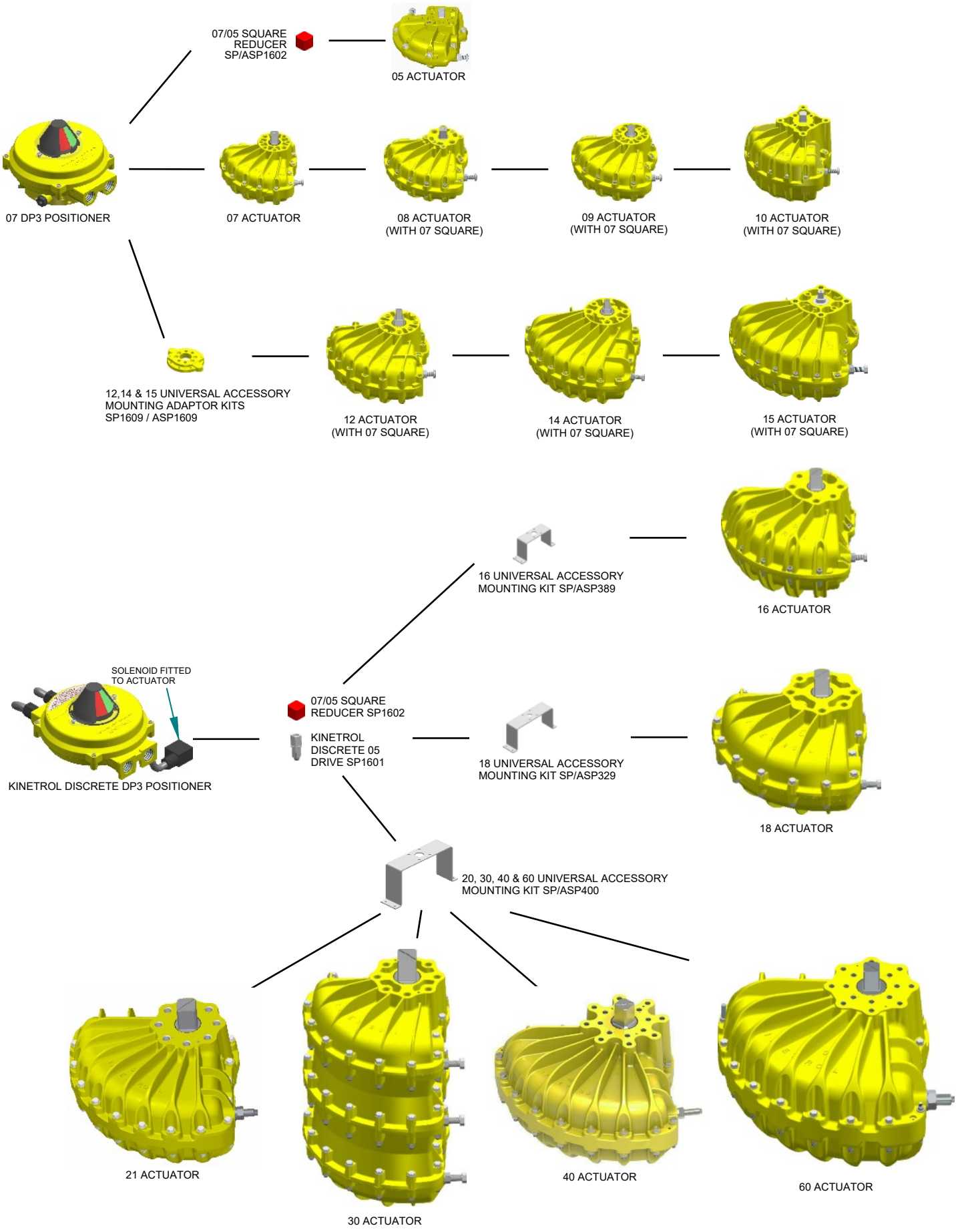
Current loop Input	4 - 20mA - impedance 250 ohm. Electrically isolated from all other inputs and outputs
Positioner Performance	Linearity - better than 1% or range Deadband - 0.1 to 3 % of range Repeatability - better than 1% of Range
Slave Valve Block Cv	1.6 (up to Model 15)
2 Wire Angle Retransmit	Supply voltage - 14.7 to 27V dc Output - 4 - 20 mA. Linearly proportionate to angular position, electrically isolated from all other inputs and outputs. Functions with or without positioner circuit energisation
Weight	1.7 kg / 3.75lb (Models 05 to 15)
Materials	Precision diecast aluminium alloy
Finish	Epoxy stove enamel
Enclosure Rating	IP67 / NEMA 6

Ordering Codes

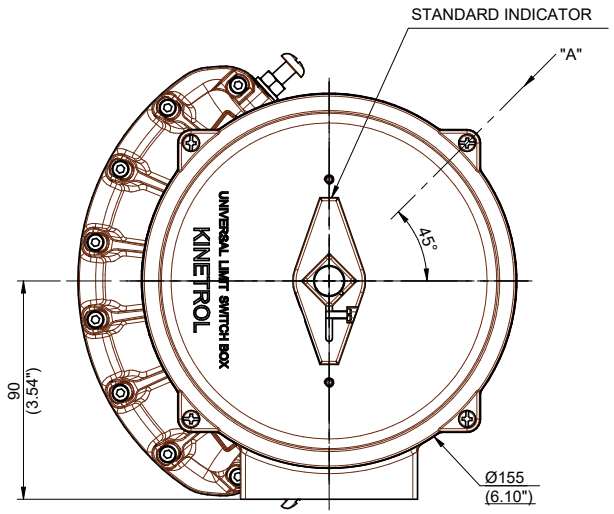


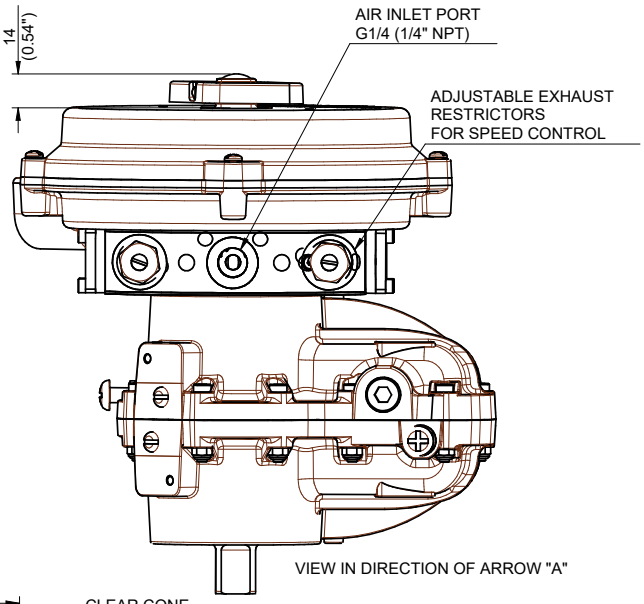
Kinetrol DP3 Positioner

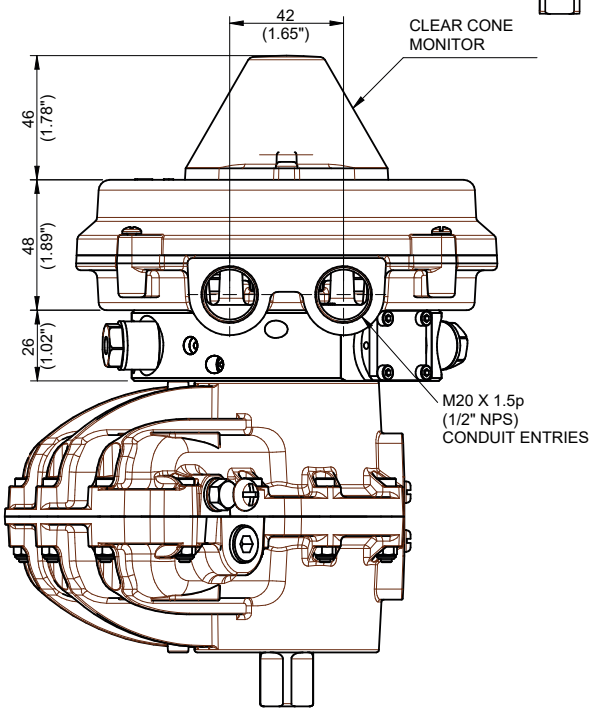
Modular Mounting Arrangement

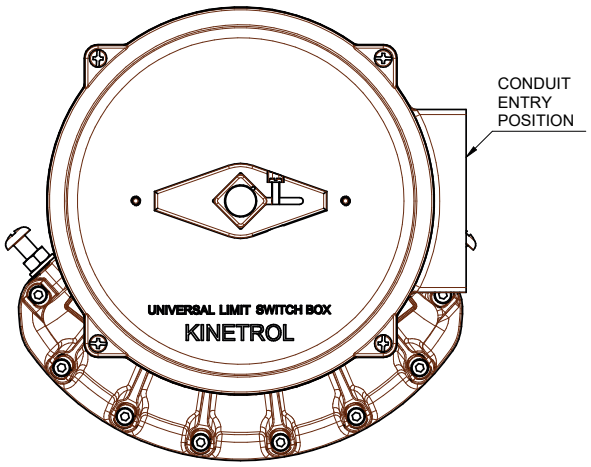


Dimensions

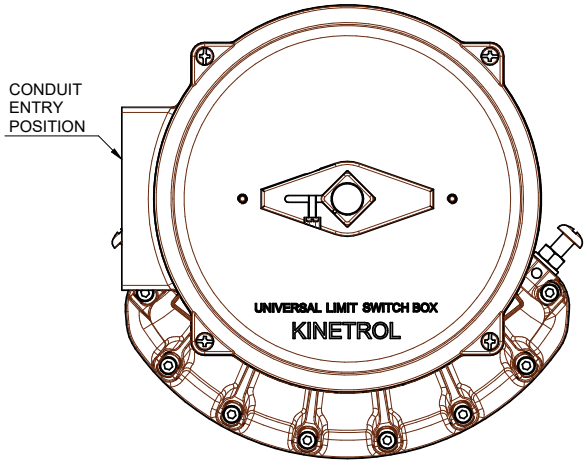








BOX MOUNTED TO ACTUATOR THIS WAY FOR:
FAIL DOWN/SPRING RETURN ACTION - ACW
AND FAIL FREE & FAIL HOLD OPTIONS

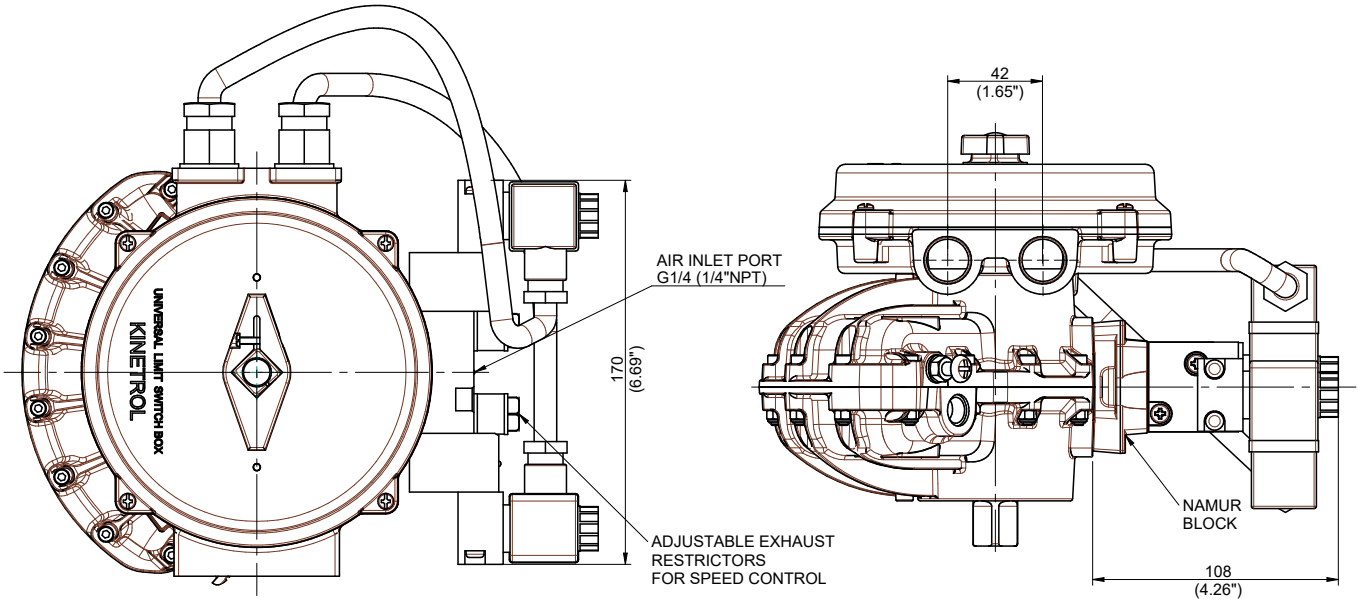


BOX MOUNTED TO ACTUATOR THIS WAY FOR:
FAIL DOWN/SPRING RETURN ACTION - CW

Models 05 to 15. Please contact Kinetrol for Model 16 to 60.

Kinetrol DP3 Positioner

Dimensions



Models 05 to 15 Fail Hold. Please contact Kinetrol for Model 16 to 60.