Actuators
Specification and Installation Instructions

Features:

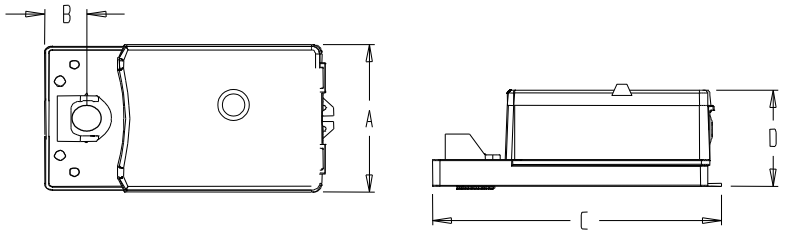
- Clutch for manual adjustments
- Maintenance free
- Position indicator
- Fail safe by *Enerdrive System*[1] (on model 060 & 080)
- Auxiliary switches (on model 020 & 080)

TT000F
TT020F
TT060F
TT080F
RT000F
RT020F
RT060F
RT080F

Technical Data	TT000F	TT020F	TT060F	TT080F	RT000F	RT020F	RT060F	RT080F
Auxiliary switches	No	Yes(2)	No	Yes (2)	No	Yes(2)	No	Yes (2)
Fail safe - *Enerdrive*	No		Yes		No		Yes	
Power consumption	10 VA		24 VA Peak, 10 VA		18 VA		40 VA Peak, 18 VA	
Control signal	3 wire / 2 position, 3 wire / 3 point floating		2 wire / 2 position, 4 wire / 3 point floating		3 wire / 2 position, 3 wire / 3 point floating		2 wire / 2 position, 4 wire / 3 point floating	
Weight	4.5 lbs. [2 kg]				7 lbs. [3.2 kg]			
Torque	120 in.lb. [13.5 Nm] at rated voltage				240 in.lb. [27 Nm] at rated voltage			
Running time through 90º	20 to 30 sec Torque dependant							
Power supply	22 to 26 VAC or 28 to 32 VDC							
Electrical connection	18 AWG [0.8 mm^2] minimum							
Inlet bushing	2 inlet bushing of 7/8 in [22.2 mm]							
Angle of rotation	0 to 90 degrees, electronically adjustable (factory set with 90º stroke)							
Direction of rotation	Reversible, Clockwise (CW) or Counterclockwise (CCW) (factory set with CW direction)							
Ambient temperature	0ºF to +122ºF [-18º C to +50º C]							
Storage temperature	-22ºF to +122ºF [-30º C to +50º C]							
Relative Humidity	5 to 95 % non condensing							

Warning: Do not press the clutch when actuator is powered

Dimensions



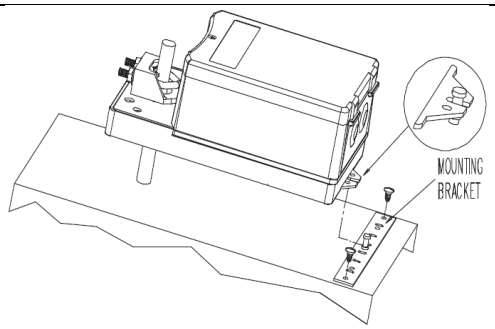
Dimension	Inches	Metric (mm)
A	5.20	132.1
B	1.33	33.8
C	9.13	231.9
D	3.55	90.2

Caution

We strongly recommend that all neptronic® products be wired to a separate transformer and that transformer shall service only neptronic® products. This precaution will prevent interference with, and/or possible damage to incompatible equipment.
When multiple actuators are wired on a single transformer, polarity must be observed. Long wiring runs create voltage drop which may affect the actuator performance.

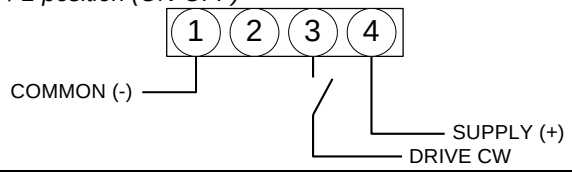
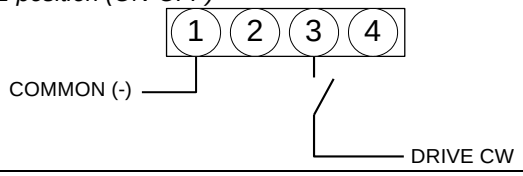
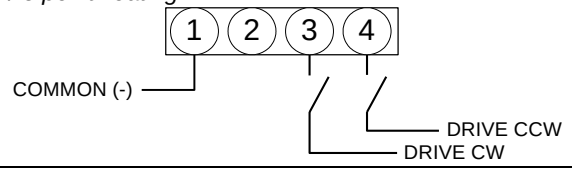
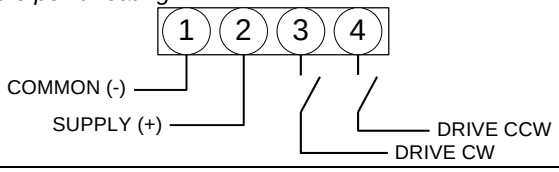
Mechanical Installation

[1] *Enerdrive System* U.S.A. Patent #5,278,454

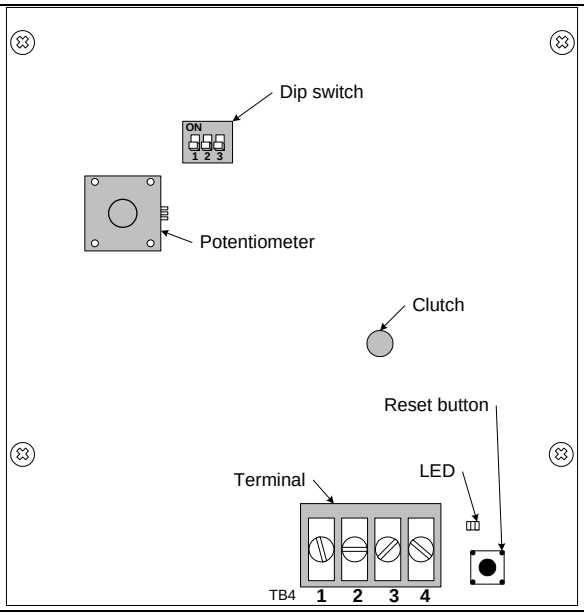


1. Manually close the damper blades and position the actuator at 0º or 90º.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the “U” bolt to the shaft with a 10mm wrench to a torque of 150 in.lb. [17 Nm].
4. Slide the mounting bracket under the actuator. Ensure free movement of the slot at the base of the actuator. The bracket pin must be placed in the mid distance of the slot.
5. Fix the bracket to the ductwork with #8 self-tapping screws.

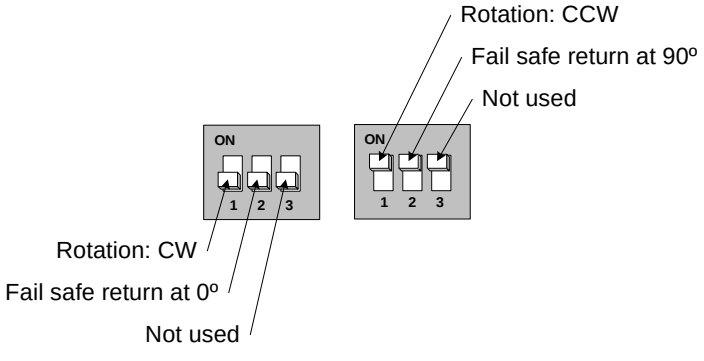
Wiring Diagrams

Models TT000F & 020F / RT000F & 020F	Models TT060F & 080F / RT060F & 080F
3 wire / 2 position (ON-OFF)	*2 wire / 2 position (ON-OFF)*
	
3 wire / 3 point floating	*4 wire / 3 point floating*
	

PC Board



Dip switch settings



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Stroke Adjustment

To adjust the stroke, press and release the reset button to start the auto-stroke process. The LED should be illuminated.

- First option:

  The actuator will then travel in both directions to find it's limit.
  The LED will extinguish, the process is complete.

- Second option:

  When the desired end position is reached, press and release the reset button. The actuator will now return back to its original position. (you can also press and release the reset button when It's reaches the original position)
  The LED will extinguish, the process is complete.