

Actuator Specification & Installation instructions



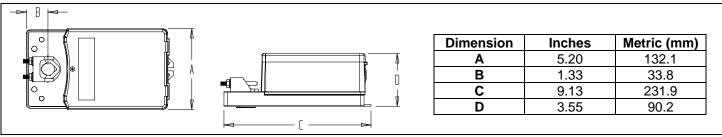
## Feature:

- Power supply high voltage 120 or 240 VAC.
- Clutch for manual adjustments.
- Maintenance free.
- Position indicator.
- Control signal fully programmable.
- Fail safe by Enerdrive System<sup>1</sup> (on model 360 & 380).
- Auxiliary switches
  - (on model 320 & 380).

Old Number	
TBMHV4300A	TM300
TBMHV4321A	TM320
TBMHV4360A	TM360
TBMHV4380A	TM380
RBMHV6300A	RM300
RBMHV6321A	RM320
RBMHV6360A	RM360
RBMHV6380A	RM380

Technical	TM300	TM320	TM360	TM380	RM300	RM320	RM360	RM380
Data	TBMHV4300A	TBMHV4321A	TBMHV4360A	TBMHV4380A	RBMHV6300A	RBMHV6321A	RBMHV6360A	RBMHV6380A
Auxiliary switches	No	Yes(2)	No	Yes(2)	No	Yes(2)	No	Yes(2)
Fail safe - Enerdrive	No Yes		es	No		Yes		
Power consumption	10	10VA 30VA Peak, 10VA		14VA		30VA Pe	30VA Peak, 14VA	
Torque	180 in.lb. [20 Nm] at rated voltage			360 in.lb. [40 Nm] at rated voltage				
Weight	5 lbs. [2.3 kg]			8 lbs. [3.5 kg]				
Running time through 90°	60 to 85 sec torque dependant							
Feedback	4 to 20 mA or 2 to 10 VDC adjustable							
Power supply	28 to 32 VDC or 22 to 26 VAC, 110 to 130 VAC, 220 to 250 VAC 50/60Hz							
Electrical connection	18 AWG [0.8 mm <sup>2</sup> ] minimum							
Inlet bushing	2 inlet bushing of 7/8 in [22.2 mm]							
Control signal	Analog, Digital or Pulse with modulation (PWM) programmable (factory set with Analog control signal)							
Angle of rotation	0 to 90 degrees, electronically adjustable (factory set with 90° stroke)							
Direction of rotation	Reversible, Clockwise (CW) or Counterclockwise (CCW) (factory set with CW direction)							
Ambient temperature	0°F to +122°F [-18° C to +50° C]							
Storage temperature	-22°F to +122°F [-30° C to +50° C]							
Relative Humidity	5 to 95 % non condensing.							
	Warnin	g: Do not p	oress the c	lutch whe	n actuator	is powered	b	

### Dimensions



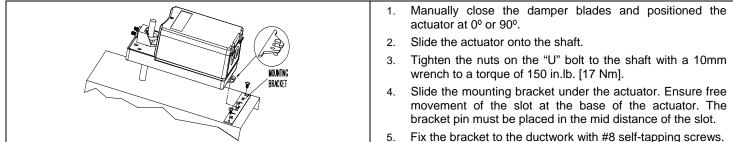
#### Caution

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.

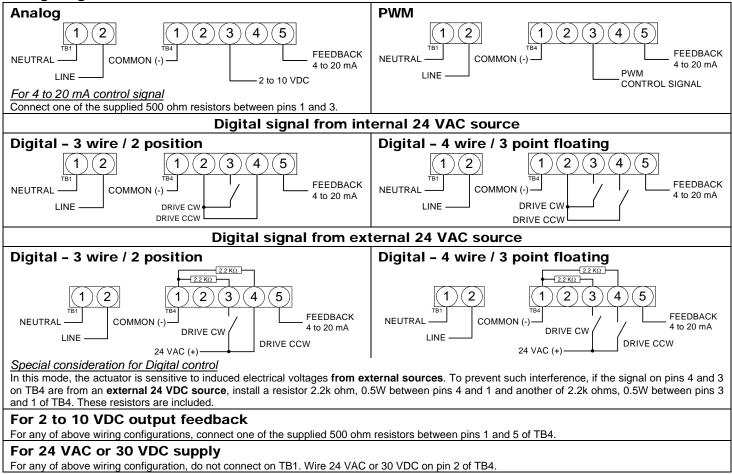
<sup>1</sup> Enerdrive System U.S.A. Patent #5,278,454



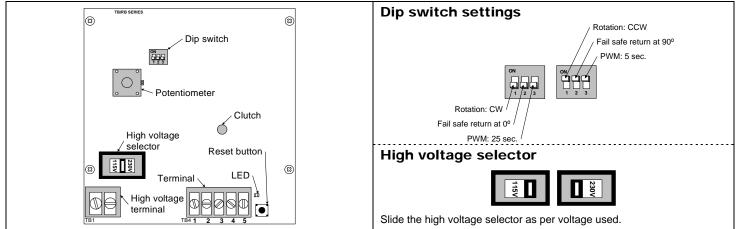
# Mechanical installation



# Wiring Diagrams



## PC Board



	adjustment - No control signal change					
	Apply power and, wait for at least 10 seconds.					
2.	<ol> <li>Press and release the reset button to start the auto-stroke process. The LED should be illuminated.</li> </ol>					
	<ul> <li>First option: The actuator will then travel in both directions to f The LED will extinguish, the process is complete.</li> </ul>	ind it's limit and position itself according to the demand.				
	<ul> <li>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.</li> </ul>					
Progra	mming - Change of control signal					
1.	1. Remove power and put all dip switches "OFF". (factory preset).					
2.	2. Apply power and, within 10 seconds, press and release the reset button. The LED should be blinking.					
3.	3. Select the control signal with dip switches:					
	<ul> <li><u>Digital</u> (On/Off or 3 point floating) move switch <u>No1</u> "ON" and then "OFF".</li> </ul>					
	<ul> <li><u>PWM</u> move switch <u>No2</u> "ON" and then "OFF".</li> </ul>					
	<ul> <li><u>Analog</u> (factory preset) move switch <u>No3</u> "ON" and then "OFF".</li> </ul>					
4.	Stroke adjustment section above.					
	<ul> <li>PWM mode is selected:</li> <li>Time base : When programming is done, if switch No3 is "on" time base is 0.1 to 5 sec. (resolution 20 msec.) if switch No3 is "off" time base is 0.1 to 25 sec. (resolution 100 msec.)</li> <li>* For 5 sec. time base, we strongly recommend a switch common connected</li> </ul>	on for better position stability.				
	Switch 24 VAC: Triac or dry contact, 40mA maximum switching current.					
	Switch common: NPN transistor, SCR, Triac or dry contact 75mA maximum	n switching current.				
eedba	ack selection (CCW direction)					
To seled	ct CCW direction put switch No1 "ON".					
	In Analog or 3 point floating mode yo	ou can program the feedback control.				
If switch	No3 is "OFF":	If switch No3 is "ON":				
The fee to 0 deg	dback control is automatically reverse to 4 to 20 mA for 90 rees.	The feedback control is to 20 to 4 mA for 90 to 0 degrees.				





# Zero and span calibration

This feature is applicable to analog control signal only.

- 1. Remove power and put all dip switches "OFF". (factory preset).
- 2. Apply power and, **within 10 seconds** press and **hold** the reset button until the LED blinks. The Zero and span calibration process then start.
- 3. Release the reset button. The LED is now constantly illuminated.
- Apply new minimum voltage. It can be any value between 0 to 7 VDC, with an external 0 to 10 volt supply (ex: MEP).
- 5. Press and release the reset button to memorize the new minimum voltage. The LED blinks.
- Apply new maximum voltage. It can be any value between 3 to 10 VDC, this value should be greater than the new minimum value.
- 7. Press and release the reset button to memorize the new maximum voltage. The LED blinks. The Zero and span calibration process is complete.

Note: To reset zero and span to 2 to 10 VDC (factory value). You just have to re-select the analog control signal mode, see Programming.

