



Feature:

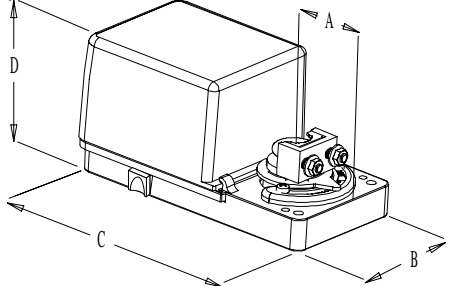
- Mounts easy on round & square shaft (optional).
- External clutch for manual adjustments.
- Maintenance free.
- Position indicator.
- Fail safe by *Enerdrive System*¹
- Auxiliary switches (on models ending by 80S)

CM060S
CM080S
CM160S
CM180S
CM260S
CM280S

Technical Data	CM060S	CM080S	CM160S	CM180S	CM260S	CM280S
Auxiliary switches	No	Yes(2)	No	Yes(2)	No	Yes(2)
Power supply	22 to 26VAC 50/60Hz or 28 to 32VDC		110 to 130 VAC 50/60Hz		220 to 250 VAC 50/60Hz	
Approvals			 Class 2			
Torque	18 in.lb. [2 Nm] at rated voltage					
Fail safe - Enerdrive	Yes					
Power consumption	10 VA Peak, 3 VA					
Control signal	2 to 10 VDC					
Running time through 90°	80 - 100 sec (Fail-safe 20-40 sec)					
Electrical connection	18 AWG [0.8mm ²] minimum					
Inlet bushing	2 inlet bushing of 5/8 in [15.9 mm] & 7/8 in [22.2 mm]					
Angle of rotation	0 to 90 degrees, mechanically 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.					
Ingress protection	IP22 equivalent to Nema type 2, IP54 equivalent to Nema type 3R if water tight inlet bushings (not supplied NEP617) are installed					
Weight	3 lbs. [1.4 kg]					

Warning: Do not press the clutch when actuator is powered

Dimensions



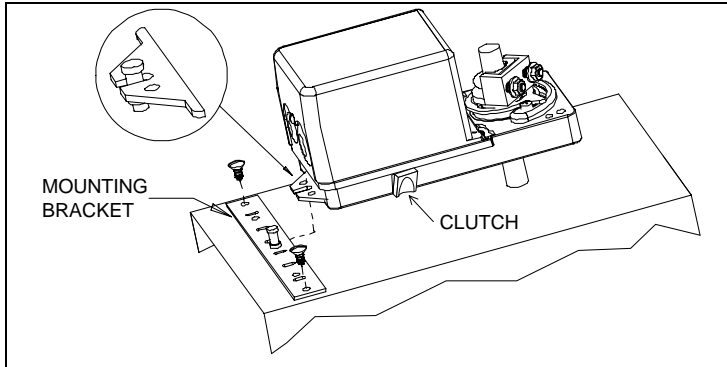
Dimension	Inches	Metric (mm)
A	1.50	38.1
B	3.26	82.8
C	6.60	167.5
D	3.01	76.4

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.

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

Mechanical installation



1. Manually close the damper blades and positioned the actuator at 0° or 90°.
2. Slide the actuator onto the shaft.
3. Tighten the nuts on the “U” bolt to the shaft with a 8mm wrench to a torque of 60 in.lb. [6,7 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 CM060S & 080S	Models CM160S, 180S, 260S, & 280S
Caution: Risk of electric shock. Remove power prior to connect.	

PC Board

<p style="text-align: center;">Line voltage terminal <i>Only on model 160S, 180S, 260S & 280S</i></p>	<p>Rotation direction Jumper (J1)</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>DIRECT</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>CW</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>(0 to 90°)</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>REVERSE</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>CCW</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>(90 to 0°)</td> </tr> </table> <p>Fail safe direction Jumper (J3 & J4)</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/> <input checked="" type="checkbox"/></td> <td>FAIL SAFE</td> <td style="text-align: center;"><input checked="" type="checkbox"/> <input checked="" type="checkbox"/></td> <td>FAIL SAFE</td> </tr> <tr> <td style="text-align: center;">RETURN AT 0°</td> <td></td> <td style="text-align: center;">RETURN AT 90°</td> <td></td> </tr> </table>	<input checked="" type="checkbox"/>	DIRECT	<input type="checkbox"/>	CW	<input type="checkbox"/>	(0 to 90°)	<input type="checkbox"/>	REVERSE	<input type="checkbox"/>	CCW	<input checked="" type="checkbox"/>	(90 to 0°)	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	FAIL SAFE	<input checked="" type="checkbox"/> <input checked="" type="checkbox"/>	FAIL SAFE	RETURN AT 0°		RETURN AT 90°	
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Stroke adjustment

To adjust the stroke, move the adjustment screws at the desired position.