

**Rotary Spring Return
Installation Instructions**

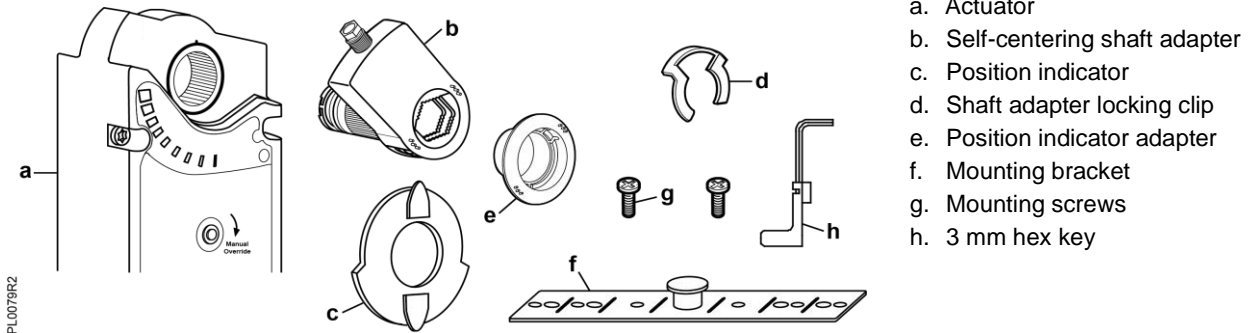


Figure 1. Parts of the DKN-MS41-7183 Actuator.

Product Description

Describes the steps for direct-coupled mounting of the Modulating Control: DKN-MS41-7183 spring return electronic damper actuator.

Product Number

DKN-MS41-7183

Warning/Caution Notations

WARNING:		Personal injury or loss of life may occur if you do not follow a procedure as specified.
CAUTION:		Equipment damage or loss of data may occur if you do not follow a procedure as specified.

Required Tools

- 10 mm (13/32-inch) open-end wrench
- Drill and 4 mm (5/32-in) drill bit
- 3 mm hex key (provided)
- Phillips screwdriver
- Small flat-blade screwdriver
- Marker or pencil

Expected Installation Time

30 minutes



WARNING:
Do not open actuator.



CAUTION:
Do not turn the 3 mm hex key against the direction of the arrow.

Mounting Positions

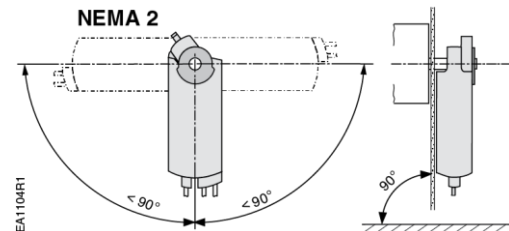


Figure 2. Acceptable NEMA 2-Positions.

Prerequisites

NOTE: The actuator is shipped from the factory with 5° preload. When power is applied to the actuator, the preload is released. To manually release the preload, insert the 3 mm hex key in the override opening and turn the key in the direction of the arrow. See *Manual Override*.

Installation

Table 1. Actuator Positioning and Damper Control.

EA1055R1	Determining the Actuator Mounting Orientation	①	Damper Type		
		②	Power Fail Spring Return Position		Close Open
		③	Actuator Mounting Orientation		

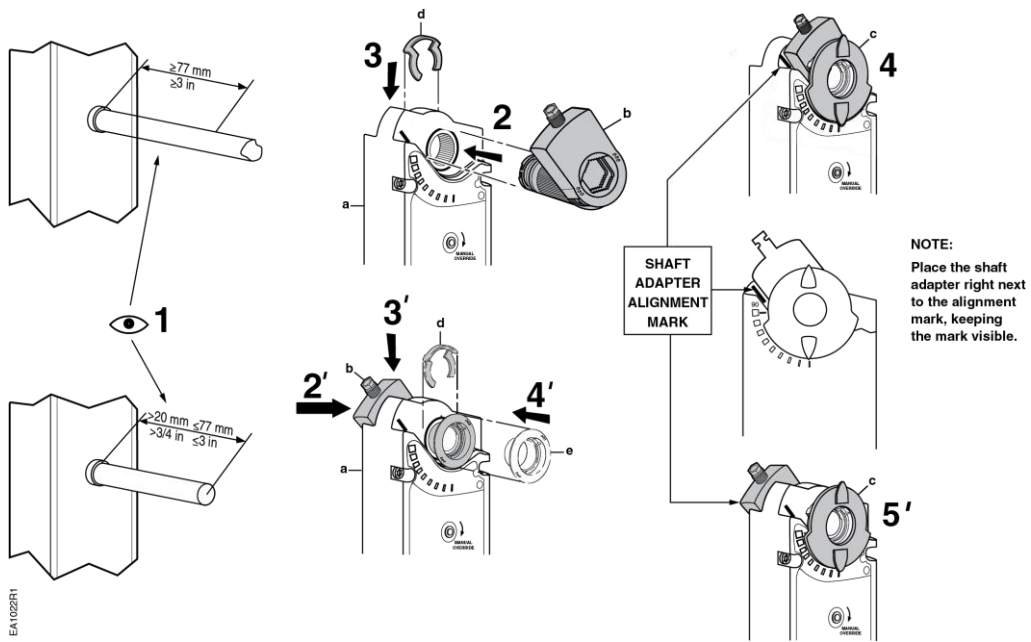


Figure 3. Shaft Length and Proper Shaft Adapter Location.

Installation, Continued

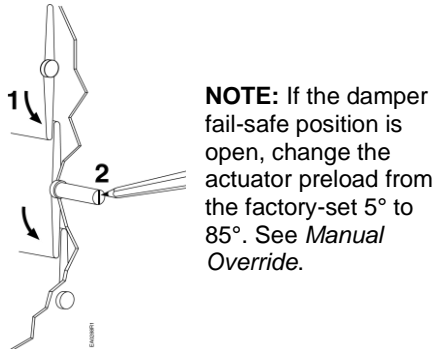


Figure 4. Close the Damper.

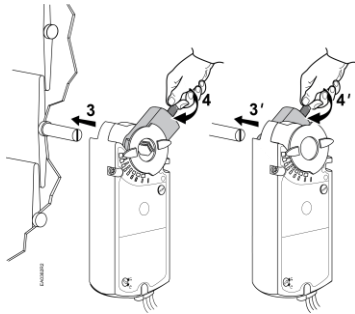


Figure 5. Place the Actuator on the Shaft.

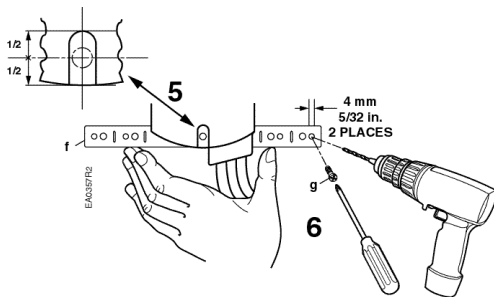


Figure 6. Fasten the Mounting Bracket.

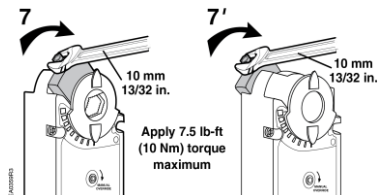


Figure 7. Fasten the Shaft Adapter to the Damper Shaft.

Manual Override

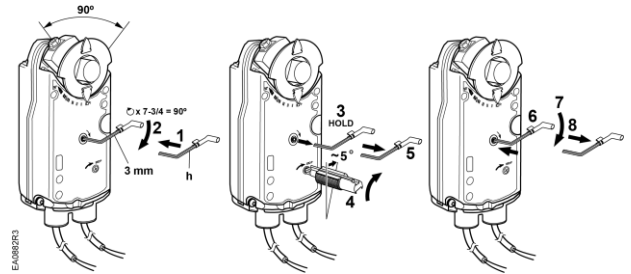


Figure 8. Manual Override.

To use manual override or set preload, do the following: (Figure 8)

1. Insert the 3 mm hex key in the override opening, (Step 1).
2. Turn the key in the direction of the arrow until you reach the desired degree of opening, (Step 2).
3. Hold the key in place, (Step 3).
4. Insert a small flat-blade screwdriver into the gear train lock pin. Turn the screwdriver in the same direction as the arrow until you hear a click or meet slight resistance, (Step 4).



CAUTION:

When engaging the gear train lock pin, cautiously turn only about 5 degrees until you hear a click or meet slight resistance. Turning too far will strip the lock pin.

5. Remove the key or keep it in place, (Step 5).

To release manual override or preload

1. Insert the 3 mm hex key in the override opening, (Step 6).
2. Turn the key only a short distance in the direction of the arrow, (Step 7).
3. Remove the key, (Step 8).

The actuator will return to **0** (fail-safe) position.

NOTE: Applying power and sending a control signal will release manual override.

Mechanical Range Adjustment

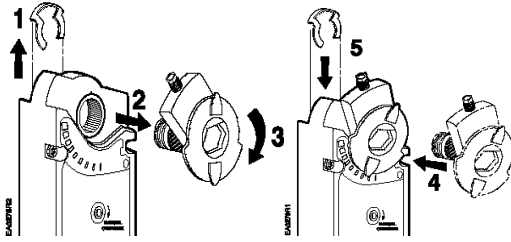


Figure 9. The Angular Rotation is Adjustable Between 0° and 90° at 5 Degree Intervals.

Ensure that the actuator is in the 0 (fail-safe) position when making this adjustment. If making the adjustment before the actuator is in service, note the factory set 5° preload. To release the preload, see *To Release Manual Override or Preload* section.

Wiring

- All wiring must conform to NEC and local codes and regulations.
- Use earth ground isolating step-down Class 2 transformers. Do not use autotransformers.

NOTE: The maximum rating for a Class 2 step-down transformer is 100 VA. Determine the supply transformer rating by summing the VA ratings of all actuators and all other components used. It is recommended that not more than 80% of the transformer VA be utilized. The DKN-MS41-7183 actuator consumes 8 VA or less.

NOTE: With Plenum cables, only UL-Class 2 voltage is permitted

Actuator	Operating Voltage	Power Consumption
Modulating Control		
DKN-MS41-7183	24 Vac	7 VA/5W

Wiring Diagrams

Modulating 0 to 10 Vdc Control, 24 Vac:
 DKN-MS41-7183

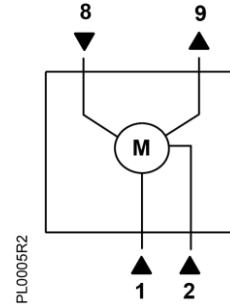


Table 2. Wire Designations.

Standard Symbol	Function	Terminal Connection	Color	
			Standard	Plenum
1	Supply (SP)	G	Red	Red
2	Neutral (SN)	G0	Black	Black
8	Input Signal 0 to 10 Vdc	Y	Gray	Gray
9	Position Output 0 to 10 Vdc	U	Pink	Pink

环境注意事项 (Environmental Notice)

[执行器](#)
 (Actuator)

中国电器电子产品有害物质限制使用管理办法
 (Management Methods for the Restriction of the Use of Hazardous Substances in Electrical and Electronic Products - China RoHS)

产品中有有害物质的名称及含量
 (Name and Content of the Hazardous Substances in Product)

30 部件名称 (electric actuator)	有害物质 (Hazardous Substances)					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr(VI))	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
电路板组件 (PCBA)	X	O	O	O	O	O
金属部件 (Metal Parts)	X	O	O	O	O	O

本表格依据 SJ/T 11364 的规定编制。
 (This table is prepared in accordance with the provisions of SJ/T 11364.)
 O: 表示该有害物质在该部件所有均质材料中的含量均在 GB/T 26572 规定的限量要求以下。
 (O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.)
 X: 表示该有害物质至少在该部件的某一均质材料中的含量超出 GB/T 26572 规定的限量要求。
 (X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.)
 所售产品中可能不含有上述部件, 请以产品实际销售配置为准, 个别部件可能单独标识环保使用期限。
 (Parts listed above may not be included within the product. Please refer to the actual configuration of the sold product. Some parts may have individual EPUP.)
 注: 环保使用期限取决于产品正常工作的温度和湿度等条件。
 (Remark: Environmental Protection Use Period depends on the product normal operation condition, such as temperature, humidity, etc.)

Dimensions

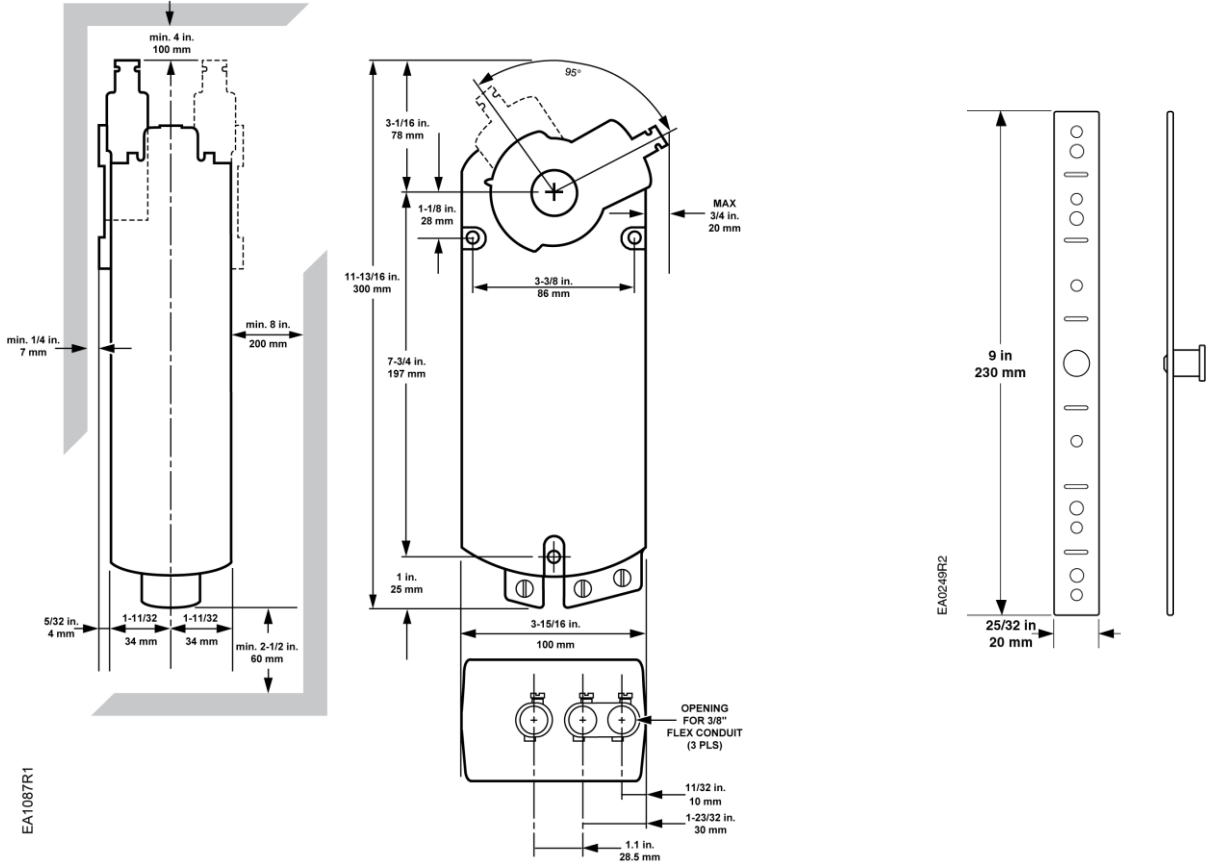


Figure 10. Dimensions of the Daikin DKN-MS41-7183 Actuator and Mounting Bracket in Inches (Millimeters).