

# MODULATING DAMPER ACTUATOR

## DESCRIPTION

The DM series modulating damper actuator is designed to provide long life service in typical HVAC damper motor applications. A 0-10V DC signal provides 90degrees motion, adjustable with feedback signal. 2-10V and 4-20ma singals also available.



## CHARACTERISTICS

### ● CONTROL SIGNALS

The standard control signal is 0~10VDC. By request we can also provide a jumper to field select between 2-10V and 4-20ma

### ●SIMPLE INSTALLATION

The actuator slips over standard square damper shafts up to 13mm square (1/2in nominal). Smaller shafts can be accommodated with an aluminum shim that is included with each motor. The rotation angle can be adjusted by internal potentiometer PT1. Once PT1 is set up the feedback signal will match 0-10V over the full range of motion. There are two mechanical end of travel stops which can be adjusted to suit the installation. A jumper can reverse the actuator direction.

### ● MANUAL OPERATION

The actuator can be moved manually for troubleshooting and commissioning by depressing the manual clutch. Keep in mind that repeated use of the clutch when the motor is powered will eventually wear down the gears, it is best to de-power the actuator when using the clutch frequently.

### ● LONG LIFE PERFORMANCE

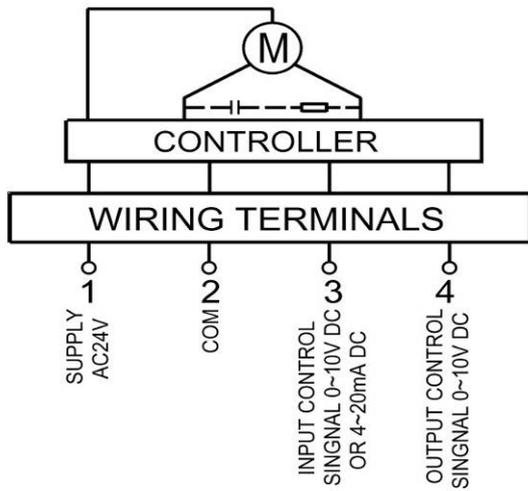
The DM series actuator uses bi-directional magnetic clutch equipped synchronous motor. It has overload protection and will time out at the end of travel so no electrical interlocking is required. Ongoing life cycle testing to 60,000 cycles is commonplace which is above industry standards.

## SPECIFICATIONS AND TECHNICAL DATA

MODEL			DM-6	DM-8
TORQUE			≥6Nm	≥8Nm
OPERATION TIME (50Hz/90°)			≈108s	≈156s
RATED VOLTAGE	24VAC±10% (50/60Hz)			
CABLE	0.5~1.5mm <sup>2</sup>			
POWER CONSUMPTION	4VA when moving			
CONTROL SIGNAL	Default: 0-10VDC Optional: 2~10VDC / 4~20mA selectable			
FACTORY SETTING	J1= DA action J4: Axle rotates to 0° when signal is lost			
POSITION PRECISION	±5%			
ROTATE ANGLE	90Deg Max			
NOISE LEVEL	Maximum 45dB(A)			
POSITION INDICATOR	Mechanical arrow			
PROTECTION CLASS	IP 40			
AMBIENT TEMPERATURE	-5°C~+50°C			
STORAGE TEMPERATURE	-30°C~+70°C			
OPERATING LIFE	>60000 operations			

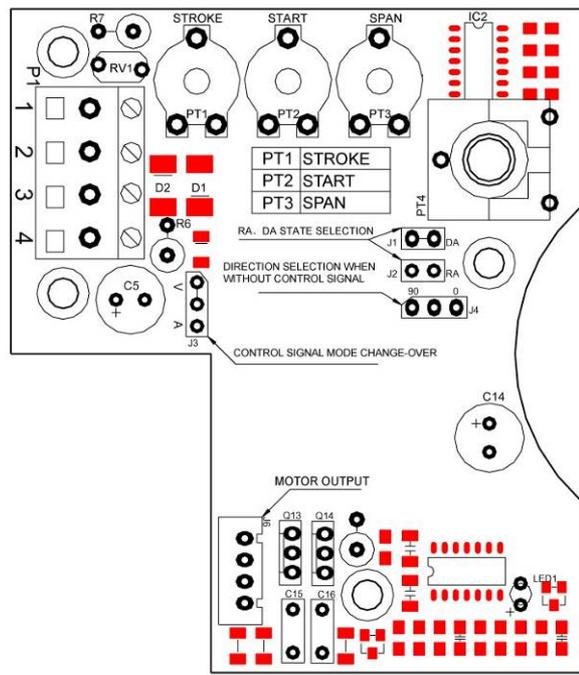
\* The accessories include 2 end stops and screws, 1 securing screw(ST4.8×12.5), and 1 aluminum shim.

## WIRING DIAGRAM

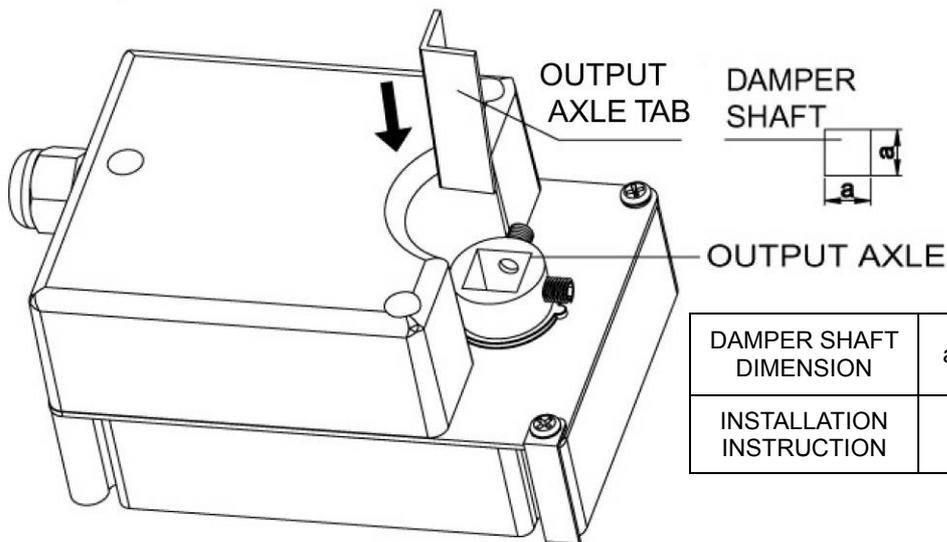
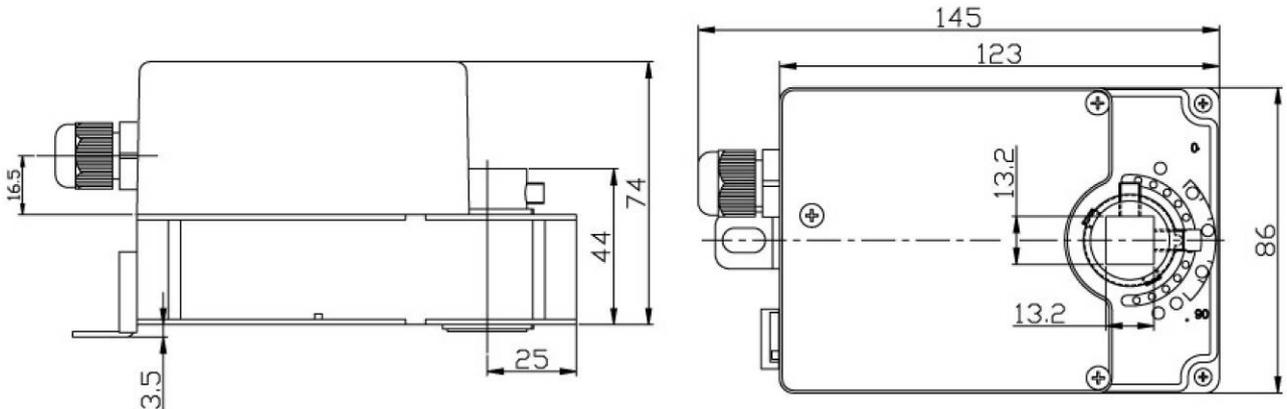


INPUT CONTROL SIGNAL		ROTATE DIRECTION
DA	RA	
INCREASING	DECREASING	↻
DECREASING	INCREASING	↻

## PCB SETTING DIAGRAM



## DIMENSIONS (mm)



DAMPER SHAFT DIMENSION	a=13mm	a=10mm
INSTALLATION INSTRUCTION	—	Use the shim for 10mm shafts.

Note: Suitable for 13×13mm (1/2 inch nominal) or 10×10mm square damper shafts. Smaller shafts can be accommodated by other sizes of aluminum shims, consult the factory for ordering.

D06	D07	D08
060227	060630	061220