

DuraDrive™ Non-Spring Return Electric Actuators

The MF41-6043 and MS41-6043 series are direct-coupled 24 Vac non-spring return electric actuators. The MF41-6043 series is designed for floating control of building HVAC dampers. The MS41-6043 series is designed to provide proportional control. Models are standard with a plenum-rated cable.

Applications

The MF41-6043 and MS41-6043 series of damper actuators are used in constant or variable air volume installations for control of HVAC dampers requiring up to 35 lb.-in. (4 Nm) torque.

Features

- Compact, lightweight design.
- Easy-to-see position indicator.
- Self-adapting capability for maximum flexibility in damper positioning.
- UL, CSA, CE compliance listed.
- Quiet, low-power operation.
- NEMA 2 rated enclosure.
- Manual Override.
- Plenum cable standard.
- Independently adjustable dual auxiliary switches option available (MX41-6043-5X2).
- Feedback potentiometer option available (MF41-6043-510).
- Feedback position output signal available (MS41-6043 Series).
- Adjustable start/span option available (MS41-6043-52X).



Specifications

Inputs

Operating Voltage: 24 Vac +20%, -15%

Frequency: 50/60 Hz

Power Consumption: 2.3 VA (MF41-6043 Series)
3.3 VA (MS41-6043 Series)

Connections: 3 ft. 18 AWG. Reference Model Chart.

Control Signal (MS41-6043 Series):

Input Signal: Voltage-input, 0 to 10 Vdc

Input resistance, 100K Ohms

Feedback Signal: (MS41-6043 Series)

Position output signal: Voltage-output, 0 to 10 Vdc
Maximum output current, DC 1 mA

Outputs

Stroke: Nominal angle of rotation, 90°

Maximum angular rotation, 95°

Field adjustable to limit travel on either end of stroke.

Damper Shaft: Accepts 3/8 to 5/8-inch (8 to 16 mm) diameters. Reference Figure-1.

Minimum shaft length, 3/4-inch (20 mm).

Nominal Damper Area: Actuator sizing should be done in accordance with damper manufacturer's specifications.

Product Life:

100,000 full strokes.

Function

Torque: rated 35 lb.-in. (4Nm)

Timing: 108 sec. at 50 HZ

90 sec. at 60 Hz

Environment

Ambient Temperature Limits:

Shipping and Storage, -22 to 140°F (-30 to 60°C)

Operation, -22 to 130°F (-30 to 55°C)

Humidity: 95% RH, non condensing

Location: NEMA Type 2, IP54 per EN60529

Housing material, durable plastic

Gear lubrication, Silicone free

Equipment Rating: Class 2 per UL, CSA, Class III per EN60730

Agency Listings

UL listed to UL873

C-UL certified to Canadian Standard C22.2 No. 24-93

CE conformity for plenum models

In accordance with European Union for Electromagnetic

Compatibility directive (EMC) 89/336/EEC

Emissions standards EN 50081-1

Immunity standards EN 50082-2

Dimensions

5-7/16"H X 2-5/8"W X 2-3/8"D (137mm H X 68mm W X 60mm

D) Width does not including manual override slider

Weight: 1.06 lb. (0.48 kg)

Auxiliary Features

Feedback potentiometer, 0 to 1000 W, <10 mA (MF41-6043)

Control Signal Adjustment: (MS41-6043)

Start Point, Between 0 to 5 Vdc

Span, Between 2 and 30 Vdc.

Dual auxiliary switch (SPDT):

Contact rating, 4A resistive, 2A inductive

Voltage, 24 Vac/24 Vdc

Switch range:

Switch A, 0 to 90° with 5° intervals

Recommended range usage, 0 to 45°

Factory setting, 5°

Switch B, 0 to 90° with 5° intervals

Recommended range usage, 45 to 90°

Factory setting, 85°

Switching Hysteresis, 2°

Accessories

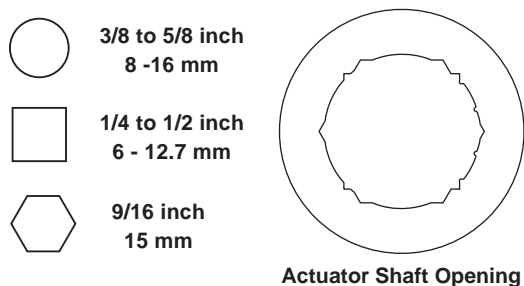
AM-728: Conduit adaptor providing a connection between the actuator and conduit.

AM-727: Rotary to linear drive adaptor.

AM-726: Rotary to linear drive adaptor with mounting bracket.

Table-1 Model Number Chart

Model Number	Auxiliary Switches	Potentiometer	Start/Span
MF41-6043	No	No	No
MF41-6043-502	Yes	No	No
MF41-6043-510	No	1K	No
MS41-6043	No	No	No
MS41-6043-502	Yes	No	No
MS41-6043-520	No	No	Yes
MS41-6043-522	Yes	No	Yes



Use the shaft insert supplied
for any 3/8-inch (8 to 10 mm) diameter shaft

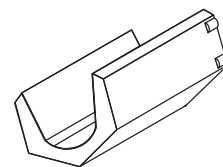


Figure-1 Damper Shaft Sizes.

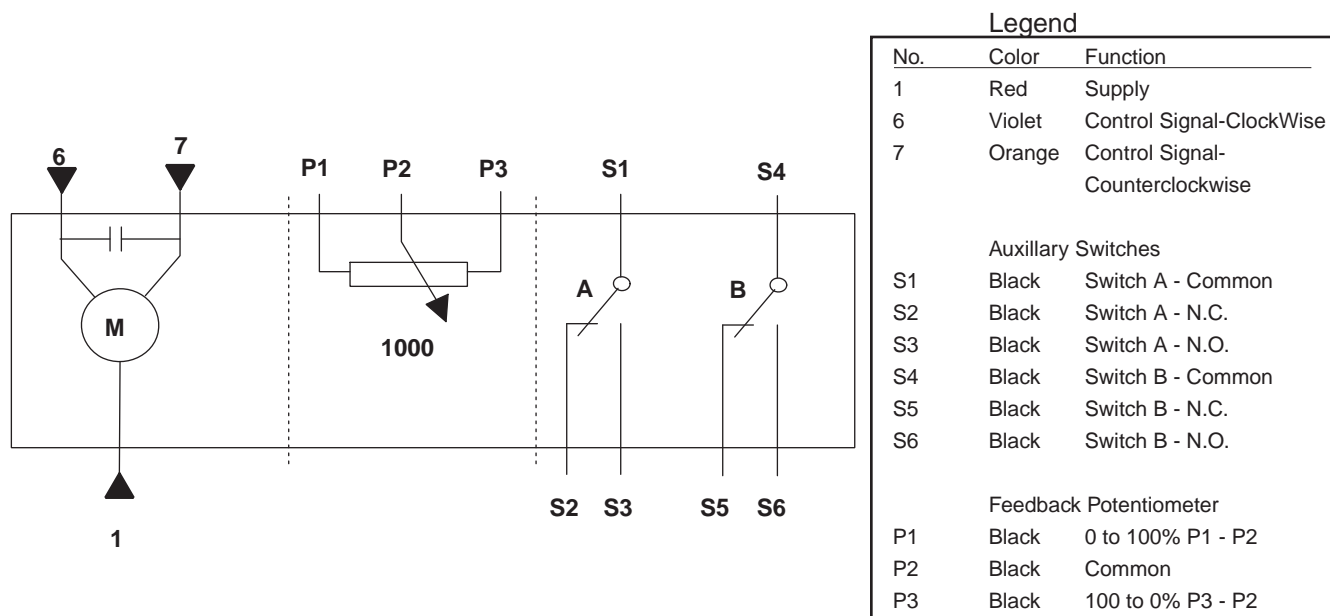


Figure-2 MF41-6043-5XX Wiring Diagram.

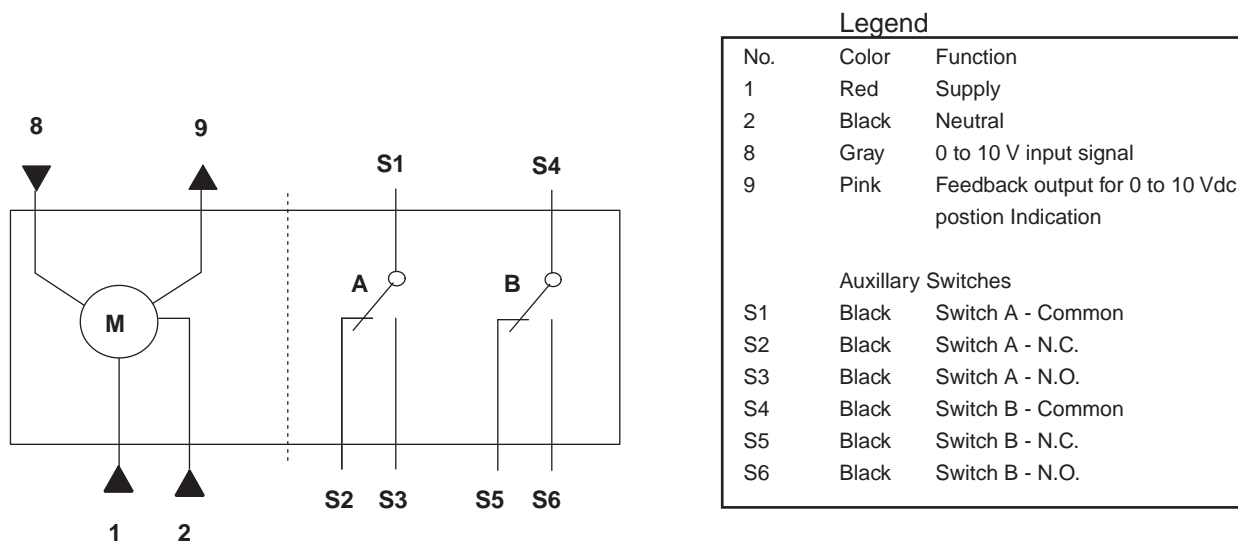


Figure-3 MS41-6043-502 and MS41-6043-522 Wiring Diagram.

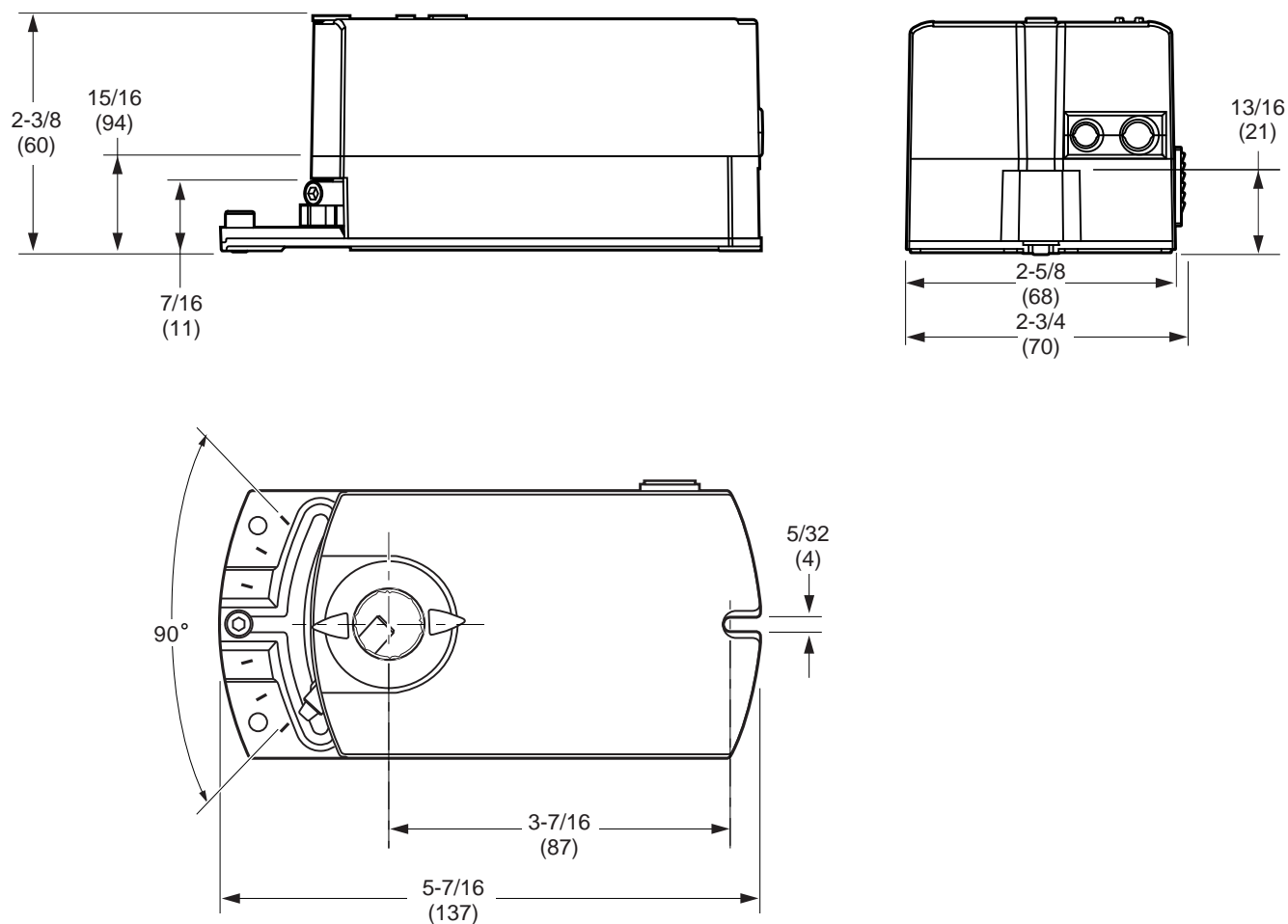


Figure-4 Actuator Dimensions Shown in Inches (mm).

On October 1st, 2009, TAC became the Buildings business of its parent company Schneider Electric. This document reflects the visual identity of Schneider Electric; however there remains references to TAC as a corporate brand in the body copy. As each document is updated, the body copy will be changed to reflect appropriate corporate brand changes.

Copyright 2010, Schneider Electric
All brand names, trademarks and registered trademarks are the property of their respective owners. Information contained within this document is subject to change without notice.

Schneider Electric
1354 Clifford Avenue
P.O. Box 2940
Loves Park, IL 61132-2940

www.schneider-electric.com/buildings

Schneider
Electric