

APPLICATION

The MLS-300 Position Indicator Package contains two independent 360° rotary switch cams for use in conjunction with certain Honeywell electric actuators. It provides an on / off signal at two adjustable points in the actuator stroke. This signal can be routed to a Fire Fighters' Smoke-Control Station for remote damper position status in Smoke Control Management Applications. The MLS-300 is usually factory mounted for Fire / Smoke and Smoke Damper applications, but can be field installed.

ELECTRICAL SWITCH RATINGS:
Switching

Single-pole, double-throw (SPDT) micro switches.

Switching Differential

Three angular degrees maximum.

Electrical Switch Ratings (at 240 Vac):

At or below 240 Vac:

Resistive Load: 8A

Inductive Load: 2A

At 125 Vdc: 0.5A

At 250 Vdc: 0.25A

Pilot Duty: 4A, 125 Vac.

Cable

Double insulated, -40°F to 130°F (-40°C to 54°C).

Conduit (not included)

3/8" flexible.

Operating Temperature

-40°F to 350°F (-40°C to 177°C). UL555/555S

Rating and Approvals:

Base Model: Honeywell 32003532-005

UL Recognized file No. E4436.

UL94-5V Plenum rating

Cable: UL Style 1180 rated 300V, 200 C, 18 gauge.

NEMA2


CAUTION

Electrical shock or Equipment Damage Hazard.

Can shock individuals or short equipment circuitry.

Discount power supply before installation and always keep device assembled.


CAUTION

Actuator Damage Hazard.

Turning motor output hub by hand or wrench can damage internal gears.

Forcibly turning the motor shaft damages the gear train.

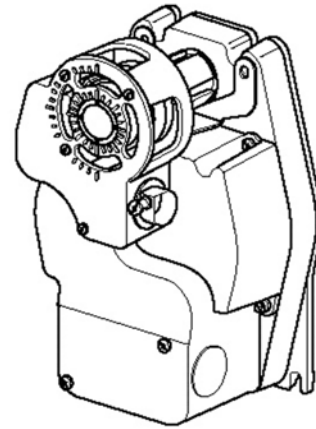


Figure 1. Honeywell ML4X02/8X02, ML4115/8115 or MS4X09/8X09 electric actuators with MLS-300 (Honeywell) position indicator package.

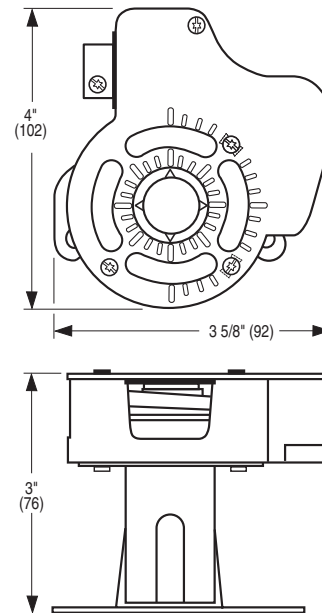


Figure 2. Dimensional detail

Factory Installation

When factory installed the switch is factory set for full open and full closed positions.

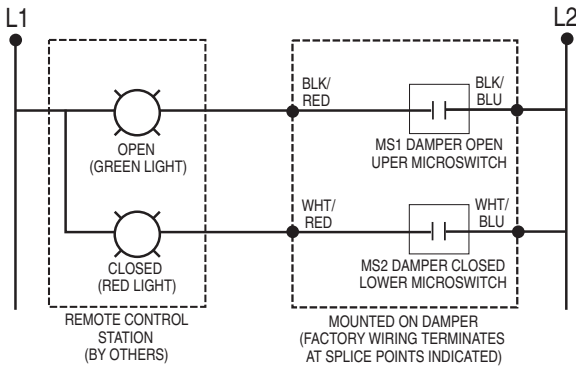


Figure 3. Wiring schematic

Standard Mounting:

MS1 is damper open signal.

MS2 is damper closed signal.

Non-Standard Mounting:

Important: Installer must double check continuity of MS1 and MS2 before wiring to determine which switch signals the damper's open or closed position.

Field Installation

Prior to installation first...

1. Read instructions carefully. Failure to follow them could damage the product or cause a hazardous condition.
2. Check ratings and description given in specification to make sure product is suitable for your application.
3. Installer must be a trained, experienced service technician.
4. After installation is complete, check out product operation as provided in these instructions.

Procedure:

1. Determine desired switching action (if switch is to energize during clockwise ↻ or counterclockwise ↻ rotation).

Note: With switch cam as shown in Figure 4, the normally closed contact opens during counterclockwise rotation and the normally open switch closes.

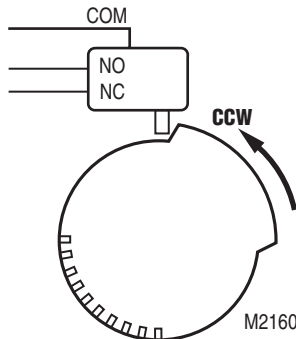


Figure 4. Switching configuration (top view) for counterclockwise ↻ rotation.

Conversely, with the switch cam as shown in Figure 5, the normally closed contact opens during clockwise ↻ rotation and the normally open switch closes.

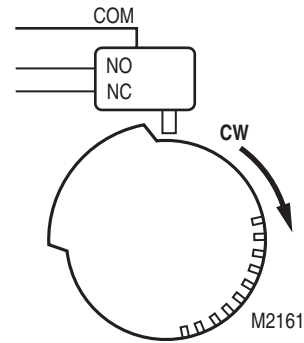


Figure 5. Switching configuration (top view) for clockwise ↻ rotation.

Note: Switches can be set prior to installation on the actuator if angular switch positions are known.

2. Align the switch hub with the setscrews on the actuator. See Figure 1.
3. Mount the switch on the actuator and tighten the two screws.
4. Determine switch position settings based on the angular indications molded into the housing.
5. Move each cam inside switch assembly to the appropriate position. Remember the direction of travel of the cam for switching purposes (see Figure 4 and 5). Monitor the switch closure with an ohmmeter for a continuity check. See Table 1.

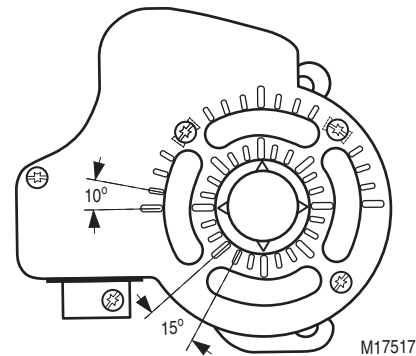


Figure 6. Angular indications of switch

Switch	Normally Open	Normally Closed
Activated	Zero ohm	Infinite ohms
Not Activated	Infinite ohms	Zero ohm

Table 1. Proper continuity measurements.

Connection	Upper Switch	Lower Switch
Common	Black / Red	White / Red
Normally Closed	Black / Yellow	White / Yellow
Normally Open	Black / Blue	White / Blue

Table 2. Position Indicator Switch Wiring Connections.