**Application**

The Honeywell auxiliary position indication switch is an add-on NEMA 2 rated switch package, rated for resistive loads of up to 8A and inductive loads of up to 2A, and is intended for use with series 4202, 4115 and 4209 series actuators.

As with the other position switch packages, such as the integral switch package shown directly below, two sets of switches provide feedback for FULL OPEN and FULL CLOSED blade position. Typically these switches are set to trip at 7° (closed position) and 85° (open position) of stroke. However, in the case of the auxiliary switch there are two cams that can be adjusted to open/close the switches at whatever location is desired.

Additionally, where most position indication packages provide normally open contact, the auxiliary switch provides for both normally open and normally closed contacts.

![Auxiliary Switch Wiring Diagram](image)

**WIRING DIAGRAM**

This document outlines the required cam positions for use with both the normally open (blue) contacts and normally closed (yellow) contacts.

Typically the factory will set the cams in the position for use with normally closed (yellow) contacts, but unless you've ordered your damper with a factory mounted and wired remote test box, we make no guarantees that every switch on every damper will be factory set.

As such we attach a label at the factory to each switch stating the "SWITCH IS NOT FACTORY SET".

There are two sets of cams inside the switch package housing, a top cam and a bottom cam. The top cam which is the cam closest to the labeled face of the switch, is referred to as the “Upper Limit” or “U-Switch” on the wiring diagram. The lower cam, which is the cam closest to the metal mounting bracket, is referred to as the “Lower Limit” or “L-Switch” on the wiring diagram.

![Diagram of Cam Positions](image)
Cam setting when wiring to the normally closed (yellow) and common (red) contacts

When the damper is mid-stroke (half way open), neither yellow contact will have current passing through it.

When the damper is in the full closed position, the upper cam is making contact, the lower contact is not making contact; there is no continuity between the Black/Yellow and Black/Red wires, there is continuity between the White/Yellow and White/Red wires.

When the damper is in the full open position, the upper cam is not making contact, the lower cam is making contact; there is continuity between the Black/Yellow and Black/Red wires, there is no continuity between the White/Yellow and the White/Red wires.
Cam setting when wiring to the normally open (blue) and common (red) contacts

When the damper is mid-stroke (half way open), neither blue contact will have current passing through it.

When the damper is in the full closed position, the upper cam is not making contact, the lower cam contact is making contact; there is no continuity between the Black/Blue and Black/Red wires, there is continuity between the White/Blue and White/Red wires.

When the damper is in the full open position, the upper cam is making contact, the lower cam is not making contact; there is continuity between the Black/Blue and Black/Red wires, there is no continuity between the White/Blue and the White/Red wires.
Adjusting the Cams

The cams can be easily rotated into position by inserting your finger into one of two large access ports in the housing of the switch package. By simply applying pressure on the cam in the desired direction of rotation, the cam will rotate; you will feel small “click’s” as it rotates. If the damper is positioned such that you cannot access the ports in the housing, an awl works well to access and position the cams when coming in from the front access slots located on the same surface as the switch’s label.

Additional Resources

Honeywell document 62-0212-02