

# AMB24-3(-S)

On/Off-Floating Point Control, Non-Spring Return, Direct Coupled, 24 V



| Technical Data               | AMB24-3(-S)  |
|------------------------------|--|
| Power Supply                 | 24 VAC $\pm$ 20% 50/60 Hz<br>24 VDC $\pm$ 10%  |
| Power Consumption            | 2.5 W (0.2 W)  |
| Transformer Sizing           | 5.5 VA (Class 2 power source)  |
| Electrical Connection        | 3 ft, 18 GA plenum rated cable<br>3 ft, 18 GA appliance rated cable (-S)<br>1/2" conduit connector   |
| Overload Protection          | electronic throughout 0 to 95° rotation  |
| Control                      | on/off, floating point   |
| Input Impedance              | 600 $\Omega$   |
| Angle of Rotation            | max. 95°, adjust. with mechanical stop   |
| Torque                       | 180 in-lb [20 Nm]  |
| Direction of Rotation        | reversible with  switch  |
| Position Indication          | reflective visual indicator (snap-on)  |
| Manual Override              | external push button   |
| Auxiliary Switch (-S Models) | 1 x SPDT, 3A (0.5A) @ 250 VAC<br>Adj. 0 to 100%, UL listed   |
| Running Time                 | 95 seconds, constant independent of load   |
| Humidity                     | 5 to 95% RH non condensing<br>(EN 60730-1)   |
| Ambient Temperature          | -22°F to +122°F [-30°C to +50°C]   |
| Storage Temperature          | -40°F to +176°F [-40°C to +80°C]   |
| Housing                      | NEMA 2/IP54  |
| Housing Material             | UL94-5VA   |
| Agency Listings†             | ccULus acc. to UL 60730-1A/-2-14,<br>CAN/CSA E60730-1, CSA C22.2<br>No. 24-93, CE acc. to 89/336/EEC |
| Noise Level                  | <45dB(A)   |
| Servicing                    | maintenance free   |
| Quality Standard             | ISO 9001   |
| Weight                       | 2.2 lbs [1000 Kg] AMB24-3<br>2.4 lbs [1050 Kg] AMB24-3-S   |

†Rated Impulse Voltage 800V, Type of action 1, (1.B for -S version), Control Pollution Degree 3.

**Torque min. 180 in-lb for control of damper surfaces up to 45 sq ft.**

## Application

For on/off and floating point control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications.

The actuator is mounted directly to a damper shaft up to 1.05" in diameter by means of its universal clamp, self-centered default. A crankarm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft.

## Operation

The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The anti-rotation strap supplied with the actuator will prevent lateral movement.

The AMB series provides 95° of rotation and a visual indicator indicates position of the actuator. When reaching the damper or actuator end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The AMB24-3... actuators use a sensorless Brushless DC motor, which is controlled by an Application Specific Integrated Circuit (ASIC). The ASIC monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

The AMB24-3-S version is provided with 1 built-in auxiliary switch. This SPDT switch is provided for safety interfacing or signaling, for example, for fan start-up. The switching function is adjustable 0 to 95°. The auxiliary switch is double insulated so an electrical ground connection is not necessary.

Add on auxiliary switches or feedback potentiometers are easily fastened directly onto the actuator body for signaling and switching functions.

## Dimensions (All numbers in brackets are in millimeters.)

