

General

The 243-3 (24) V Series electronic transducer/actuator is designed to provide an integrated package, consisting of transducer and actuator, pre-wired and assembled. The transducer and damper actuator functions are totally independent of each other but are available factory assembled and wired for easy installation and convenience. Both the transducer and actuator require 24V AC uninterrupted power and may utilize the same power sources.

Typically, the transduced output signal becomes the input to a Micro Computer, Distributive Process Controller or EMS System. The actuator is energized by a tri-state control function (by others) that controls the actuator as a floating controller.

Description

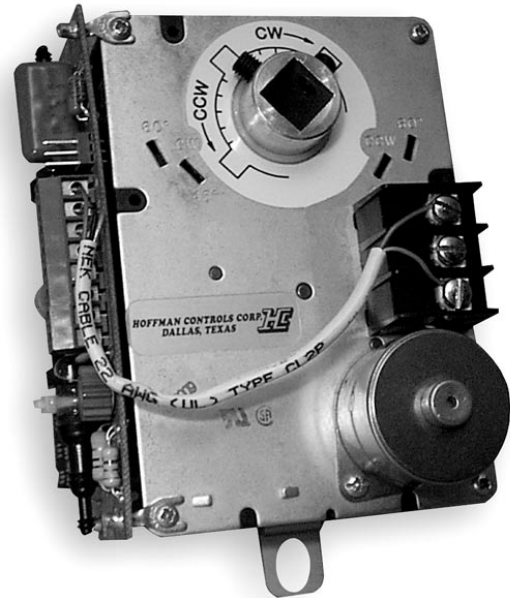
Transducer Section

The electronic transducer is designed to accept pneumatic velocity inputs, and directly convert the signals into DC volts. Two output signals are available. A 11.0 to 16.5V DC or 11.0 to 16.5mA DC output signal is proportional over a range of 0 – 4000 FPM. The V DC output is selected by using the appropriate terminals for the desired signal. Velocity (flow) signals are developed by utilizing a velocity pressure differential as derived by sensing total pressure and static pressure. The differential pressure (velocity pressure) causes a flow of calibrated air to be sampled from the air distribution system.

Pickup tubing length or routing may affect output signals. See 203-4 (24) V Series Installation & Operation Instructions for requirements and limitations.

The use of velocity pressure differential probes afford calibrated flow signals, when Hoffman Controls probes are used. Other typical single point or averaging design pickup probes can be utilized; calibration of flow or pressure, in V DC or mA however will be required for the type and design used.

The transducer requires non-interrupted 24V AC power. Transducers are flow temperature compensated, factory pre-calibrated and do not require any field adjustment.



243-3 (24) V Series Transducer/Actuator

Actuator Section

The actuator is used as a mounting base for the flow transducer previously described. Terminal blocks are provided for driving the 24V AC actuator CW or CCW, with the power controlled through remote N.O. closures as a floating control. Mechanical stops are provided for limiting actuator rotation to 45° or 60°. The 90° travel has no stop. See the 243-3 (24) V Series Installation & Operating Instructions for detailed instructions.

The actuator is designed to accept 0.375 or 0.5 inch round or square shafts. A minimum shaft length of 1.75" is required beyond the mounting surface to properly securing of the shaft collar to the shaft with set screws. The actuator may be operated in a continuous stall against the CW or CCW stop.

For additional details and specifications regarding the actuator, refer to the Installation and Operating Instructions for the 241-2 Series Actuator.

Specifications

	<u>Transducer</u>	<u>Actuator</u>
Voltage Input (nominal)	24V AC	24V AC
Power @ 24V AC	4VA	2VA
Frequency	50/60 Hz	50/60 Hz
Output		
Terminal 3 – 5	11.0 – 16.5V DC	–
Load:	10K Min. Ohms	–
Terminal 4 – 5	11.0 – 16.5mA DC	–
Load:	0 – 500 Ohms	–
Rotational Speed	–	2 sec./deg.
Torque @ 24V AC		
Run	–	35 in.-lb.
Stall (Minimum)	–	45 in.-lb.
Shaft Size – round or square		
Nominal Diameter	–	0.50 in.
Optional Diameter	–	0.375 in.
Length, Min.	–	1.75 in.
Temperature		
Operating	+40° to +120°F	32° – 130°F
Storage	0° to +120°F	–20° – +130°F
Humidity		
(Non-condensing)	5% – 95% RH	5% – 95% RH