

Description

The KMC TSP-6001/6051 are combination air flow transducer and actuator units designed primarily for variable air volume terminal units controlled via Direct Digital Control (DDC) systems such as KMC's Digital System. Specific applications include slaving from the KMD-6002/6052 in dual duct or tracking applications.

Each unit mounts directly to a 1/2" diameter or 3/8" square damper shaft, or a 3/8" diameter shaft (HFO-0011 shaft adaptor required). Damper control is provided by an 18°/minute or 60°/minute actuator. The actuator is controlled by a three-state analog signal; less than 2 VDC drives CCW, greater than 2.5 VDC drives CW, and 2.25 VDC is idle. A minimum of 50 in-lbs of torque is provided. Both minimum and maximum stops are standard to limit the rotation. A gear disengagement feature allows positioning the damper and/or gear-train without energizing the actuator.

The TSP-6001/6051 has an on-board flow-through sensor for use with a single or multi-point differential pressure measuring station or pitot tube. The sensor utilizes twin platinum-ceramic resistance temperature sensors. Velocity measurement is maintained at 3% accuracy over the range of 0 to 3,000 feet per minute (FPM).

Features

- ◆ Direct mounting to 1/2" diameter or 3/8" square damper shaft, or a 3/8" diameter shaft (requires HFO-0011 shaft adaptor)
- ◆ 18°/minute or 60°/minute actuator models
- ◆ Three-state analog signal controls actuator motion
- ◆ Gear disengagement feature allows positioning the damper and/or gear-train without unit activation
- ◆ On-board flow-through sensor for use with a single or multi-point differential pressure measuring station or pitot tube



Application

KMC TSP-6001/6051 Air Flow Transducer-Actuator are used in VAV terminal units controlled via Direct Digital Control (DDC) systems in slave or dual duct tracking applications.

Models

This product is available in two models:

TSP-6001	18°/minute actuator
TSP-6051	60°/minute actuator

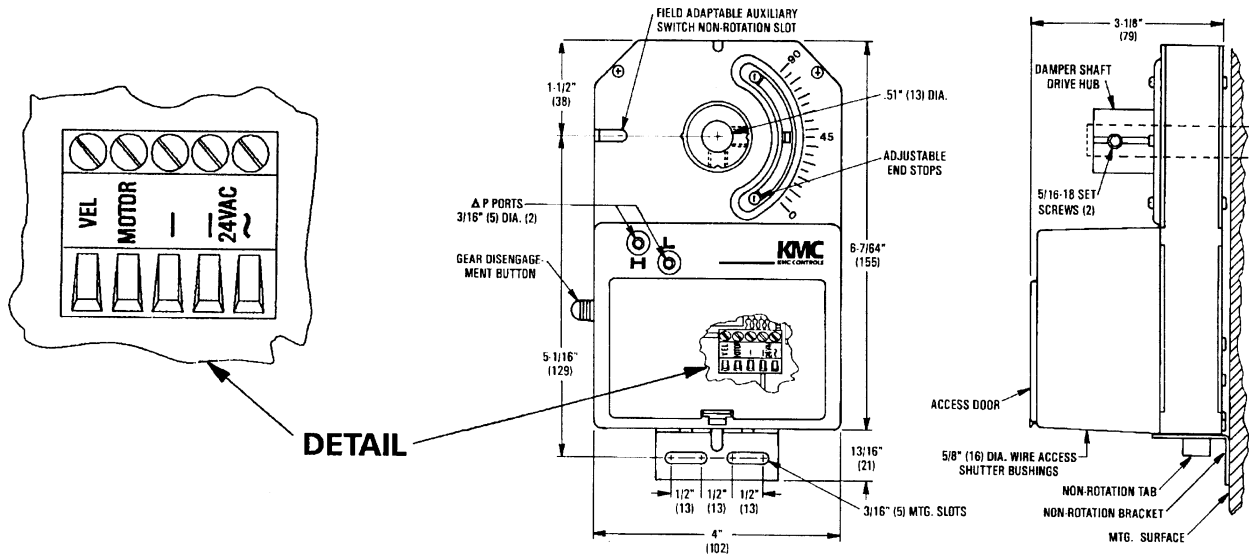
Accessories

The following accessories are available:

CME-1002	Single auxiliary switch
CME-1004	Dual auxiliary switch
CME-1006	Triple auxiliary switch
HFO-0011	3/8" shaft adaptor
HMO-4518	Snap-in connector for 1/2" flexible metal conduit
HMO-4520	Compression connector for cabled wire

Details

All dimensions are in inches (mm).



DAMPER TYPE	Up to 1000 FPM	1000 to 2500 FPM	2500 to 3000 FPM
Opposed Blade without seals	3 in.-lb. / sq.-ft	4.5 in.-lb. / sq.-ft	6 in.-lb. / sq.-ft
Parallel Blade without seals	4 in.-lb. / sq.-ft	6.0 in.-lb. / sq.-ft	8 in.-lb. / sq.-ft
Opposed Blade with seals	5 in.-lb. / sq.-ft	7.5 in.-lb. / sq.-ft	10 in.-lb. / sq.-ft
Parallel Blade with seals	7 in.-lb. / sq.-ft	10.5 in.-lb. / sq.-ft	14 in.-lb. / sq.-ft

Specifications

Supply Power	24 VAC, -15/+20%, 5 VA
Velocity Sensor	Platinum/ceramic flow-thru
Velocity Range	0 to 3,000 FPM (15.24 m/s) dependant upon DP pickup, tubing size/length and connections
Velocity Output	0 to 5 VDC
Torque	50 to 70 in.-lb (5.7-7.9 N•m)
Connections	Wire clamp for 14-22 AWG Cu
Angular Rotation	0 to 95°, both end stops adjustable
Motor Drive	≤ 2.0 VDC = CCW ≥ 2.5 VDC = CW 2.25 ± 0.2 VDC = idle

Motor Timing

TSP-6001	18°/minute @ 60 Hz; 15°/minute @ 50 Hz
TSP-6051	60°/minute @ 60 Hz; 50°/minute @ 50 Hz

Material

UL94-5V flame retardant
polymer, black housing/white
cover

Weight

2.4 lb. (1 kg)

Temperature Limits

Operating	32° to 120°F (0° to 49°C)
Shipping	-40° to 140°F (-40° to 60°C)

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