

Description and Application

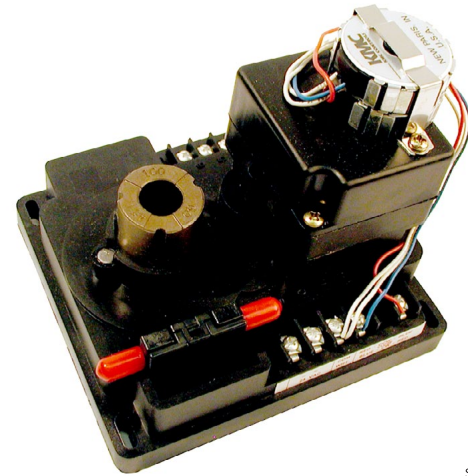
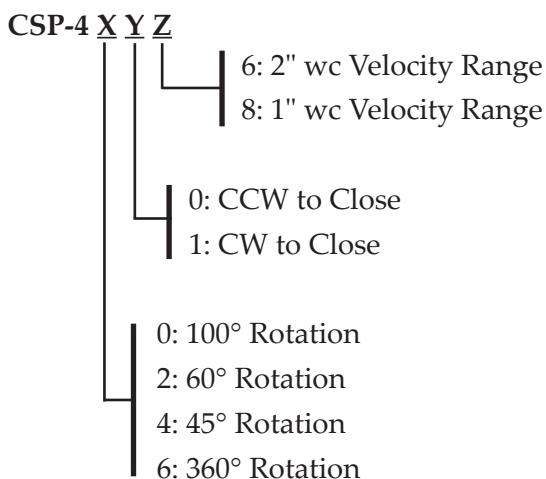
The analog electronic CSP-4000 VAV Flow Controller-Actuators are pressure-independent combination controller-actuators designed primarily for use on variable air volume terminal units. They use a multi-point or single-point differential (velocity) pressure measuring station or pitot tube for sensing airflow. Designed with a passive mass airflow sensor utilizing two Wheatstone bridges, each measures dynamic differential pressure, which corresponds linearly to reset.

These units afford full-range flow control of VAV terminal units when used with the CTE-5202 or the CTE-1000/1100/5000 series room thermostats. Minimum and maximum flow control limits are set at the wall thermostat. Available control options include proportional or on/off wet or electric reheat, dual minimum, fan induction, dual duct, and computer interface.

The internal magnetic clutch ensures that excessive torque will not be applied to the gear train.

Models

Use this chart to make your selection (but not all possible model configurations may still be available—check the [web site](#) for current information):



Features

- ◆ Onboard mass air flow sensor
- ◆ Magnetic clutch
- ◆ Mount for auxiliary switch or potentiometer

Accessories

Thermostats

CEE-1100 Series	Remote thermostat/controllers
CTE-1000 Series	Thermostats
CTE-1100 Series	Thermostats
CTE-5000 Series	Thermostats
CTE-5202	Thermostat with LCD display

Feedback Potentiometers and Auxiliary Switches

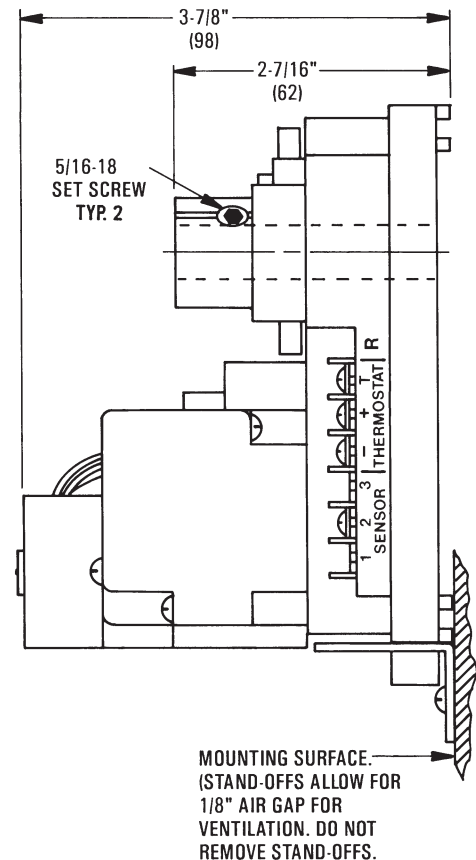
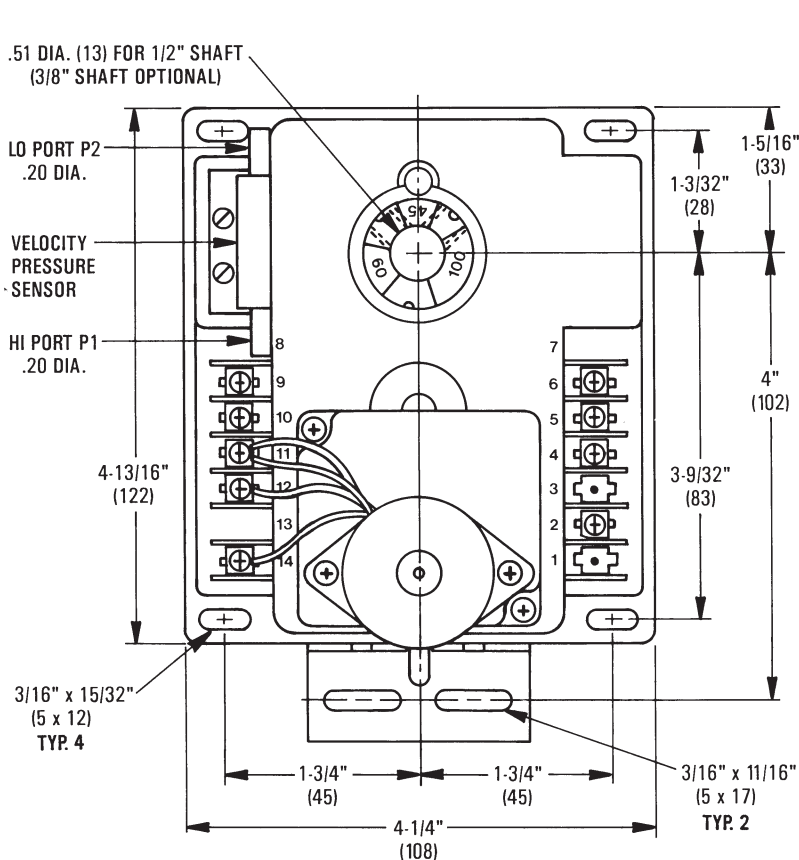
CME-100x	Auxiliary cam switches
CME-200x	Rotary feedback potentiometers

Other Accessories

HFO-0011	Adaptor for 3/8" shaft
HFO-0034	In-line 5 micron filter for use on "Hi" sensor connection
HPO-0062	Replacement electric motor/gearbox (for date codes after 9225)
SSS-1000 Series	Differential air flow sensors (also requires a 3/8" x 1/4" barb union tubing adapter purchased elsewhere)

Dimensions and Connectors

All dimensions in inches (mm).



Specifications

Supply Voltage	24 VAC -15/+20%, 50/60 Hz, Class 2
Supply Power	3 VA
Output Supply	9.1 VDC (22 mA)
Output Torque	45 ±10 in-lbs. (5 ±1 N•m)
Velocity Range	1" wc (249 Pa) or 2" wc (498 Pa)
Angular Rotation	45°, 60°, 100°, or 360°
Stroke Time	18° per minute @ 60 Hz, 15° per minute @ 50 Hz
Control Action	PI
Proportional Band	0.012" (1" wc range) 0.024" (2" wc range)
Integral Time	23.5 seconds
Mounting	Direct to 1/2" (13 mm) diameter shaft or 3/8" (10 mm) diameter with adaptor
Material	Glass-filled nylon
Weight	1.75 lbs. (0.79 kg)

Connections

Wire	Plated screw terminals
Air	0.2" (5 mm) nipples for 1/4" (6 mm) OD tubing

Temperature Limits

Operating	40 to 120° F (4 to 49° C)
Shipping	-40 to 140° F (-40 to 60° C)

More Information

For installation instructions, see the [CSP-4000 Installation Guide](#). For sample applications, see the equivalent information for the CEP-4000 series in the [CEP-4000 Applications Guide](#) and the [CTE-5202 Applications Guide](#).

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