

ELECTRONIC CEP-4000 Series

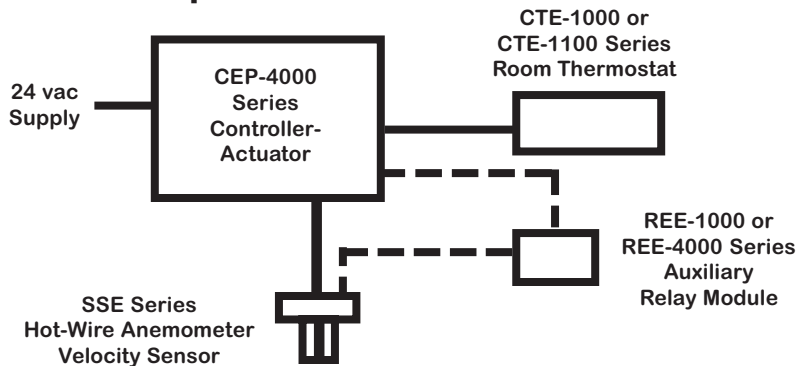
VAV TERMINAL UNIT CONTROL SYSTEM

System Configurations

Pressure Independent

DYNACON INC

www.dynacononline.com



BASIC CONTROL LOGIC

1. In response to space temperature, the room thermostat sends a 3 to 6 vdc "desired air flow" signal to the CEP-4000 series controller-actuator.
2. The controller-actuator compares this "desired air flow" signal to "actual air flow" as derived electronically using input from the SSE series duct sensor.
3. The controller-actuator drives the VAV damper box open or closed as required to match airflow requirements.

For individual component specifications, see following pages in this section.

- Cooling or heating airflow sensed by temperature compensated hot-wire anemometer sensor.
- Velocity sensing unaffected by changes in duct air temperature.
- Air velocity minimum and maximum flow limits set at the room thermostat.
- CEP-4000 series controller-actuator direct couples to damper shaft on VAV terminal unit.
- REE series relay modules available for reheat, heating/cooling changeover, and other applications.

TYPICAL CEP-4000 SERIES SYSTEM CONFIGURATIONS

Single Duct Cooling with Airflow Limits set at Thermostat					
	Cooling Only	With Electric Reheat	With Warm-Up to Full Open	With Automatic H/C Changeover	With Proportional Hot Water Reheat
Controller-Actuator	CEP-4000 series	CEP-4000 series	CEP-4000 series	CEP-4000 series	CEP-4000 series
Flow Sensor	SSE-1001 or SSE-1002	SSE-1001 or SSE-1002	SSE-1001 or SSE-1002	SSE-2001 or SSE-2002	SSE-1001 or SSE-1002
Room Thermostat	CTE-1001 or CTE-1101	CTE-1004	CTE-1001 or CTE-1101	CTE-1003 or CTE-1103	CTE-1004
Relay Module	-----	REE-4001	-----	REE-1005	REE-4006
Other Controls	-----	contactors for heating elements	SPDT relay	-----	VEP12/22/34 n/c valve
	APE-1-4001/4003	APE-1-4005	APE-1-4007	APE-1-4014	APE-1-4017

Dual Duct (Hot and Cold Decks) with Airflow Limits set at Thermostat			Fan Powered Induction Boxes with Airflow Limits set at Thermostat	
	With Minimum Air from Either Deck	With Constant Airflow Volume	With 2 Stages of Electric Reheat	With 2 Stages of Electric Reheat & Night Setback
Controller-Actuator	(2) CEP-4000 series	(2) CEP-4000 series	CEP-4000 series	CEP-4000 series
Flow Sensor	(2) SSE-1001 or SSE-1002	(2) SSE-1001 or SSE-1002	SSE-1001 or SSE-1002	SSE-1001 or SSE-1002
Room Thermostat	CTE-1003 or CTE-1103	CTE-1003 or CTE-1103	CTE-1101	CTE-1105
Relay Module	-----	-----	REE-4002	REE-4002
Other Controls	-----	-----	contactors for fan & reheat	contactors & DPDT relay
	APE-2-4001	APE-2-4005	APE-3-4001	APE-3-4003

For wiring diagrams and sequence of operation for any of above applications, contact Dynacon.