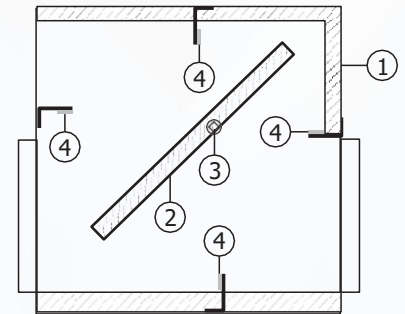


## 1. Description & construction

The AE240-Series is a single duct conversion unit accommodating 600mm constant volume low or medium pressure packaged air handling units. It is installed on the side of the duct in the return air section and provides the design for bypass applications for low temperature return air streams. Thermostat Control is achieved by supplying the right amount of conditioned air (air through heating or cooling process) in the space to give the desired temperature. Additional air is extracted through the turnover grille and is then directed to the return air regression ceiling plenum, either for free or by a duct. Air travel to each occupied zone change based on thermostat demand from full travel with set temperature down to a minimum or mechanic Air Volume.



An outside air intake is building into the main air duct that provides a constant supply of primary air while a damper directs it to some parts of the plenum in order to return it. The air-conditioning system also involves the use of the thermostat that is situated in the occupied space to offer the volume of air that will provide thermal demand. A setting is done on an Inlet balancing damper to provide the air pressure needs from the supply airways to the conditioned space.

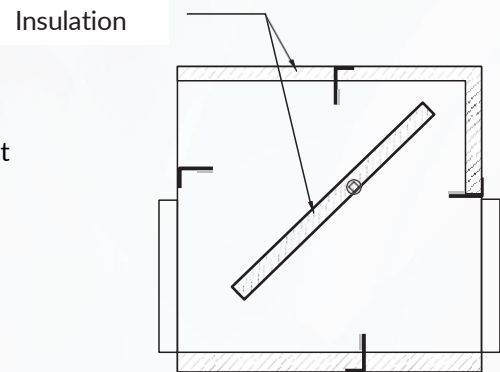


- ✓ **Casing:** Shall be made of 22 Gauge, L.F.Q Galvanized Steel, Complying with ASTM A653, having G90 Coating Designation, with Rectangular Inlet & Outlet. (Connection Optional)
- ✓ **Blade:** Shall be made of 22 Gauge Galvanized Steel which is Designed for Reliable Long-Term Operation and 90° Rotation.
- ✓ **Axles & Shaft:** Shall be 10x10mm Square, GI Shaft.
- ✓ **Linkage:** Side Linkage Concealed in Frame for the Blade Operation

- ① Casing
- ② Blade
- ③ Axle
- ④ Seal (Gasketing)

## 2. Insulation & performance

Clean Linear is produced from strong resilient glass fibers firmly bounded together with thermosetting resin which provides efficient sound insulation.



### THERMAL PERFORMANCE

KCL 48 kg/m <sup>3</sup>						
Thermal conductivity W/m.k	0.03	0.031	0.032	0.036	0.038	0.042
Mean temperature °C	0	10	25	50	75	100
Tested in accordance with ASTM C518						

### ACOUSTICAL PERFORMANCE

KCL 48 kg/m <sup>3</sup> Thickness 25mm	Absorption coefficient at one third octave band center frequencies (Hz)						
	125	250	500	1000	2000	4000	NRS
	0.22	0.52	0.73	0.98	1.02	1	0.8
Tested in accordance with ASTM C423							

### PHYSICAL PERFORMANCE

Properties	Performance	Test Method
Operation Temperature Limits	Maximum 230 <sup>0</sup> C	ASTM C 411
Water Vapor Absorption	Not Greater than 1% by Volume	ASTM C 1104
Fungi Resistance Bacteria Resistance	Does not Breed or Promote Growth	ASTM C 1071
Air Velocity Rating	25.4m/s	UL 181
Air Eroding Rating	Nil at 63.5m/s	UL 181

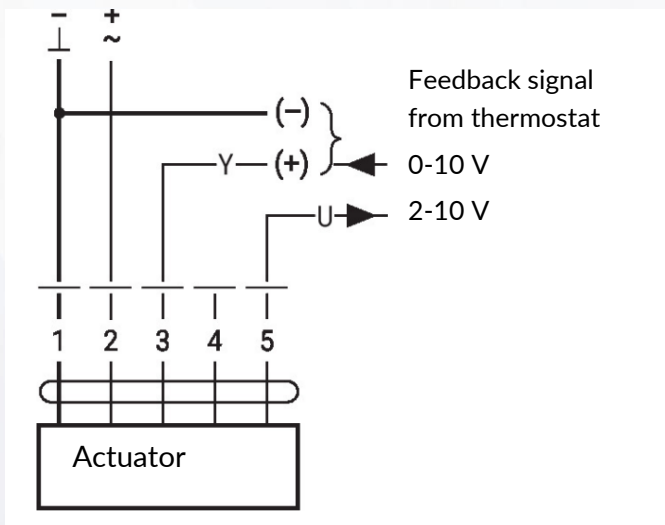
## 3. Electronic Actuators

An electric signal from a proportional “Room Controller” thermostat is transmitted to the actuator. The electronic actuator adjusts the position of the Bypass VAV plate proportionally, increasing or decreasing the primary airflow based on the temperature set-point in the room controller thermostat. In addition to connecting the power supply, you must also connect the appropriate control and feedback wires between the thermostat and the actuator.

- Feedback signal options: 0/2-10 V and 3-position.
- Torque options: 5 NM and 10 NM.
- Operating voltage: 24 V
- Actuators are selectable based on the size of the VAV, up to 1.5 sq.m.

Configurable room automation station with built-in 10 NM actuator, BACnet/IP, 24 V, and pressure sensor.  
Combination also available as needed

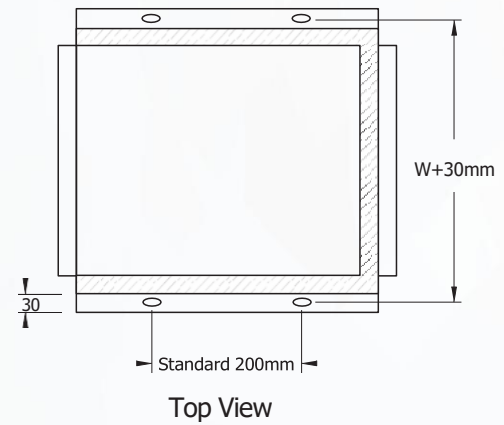
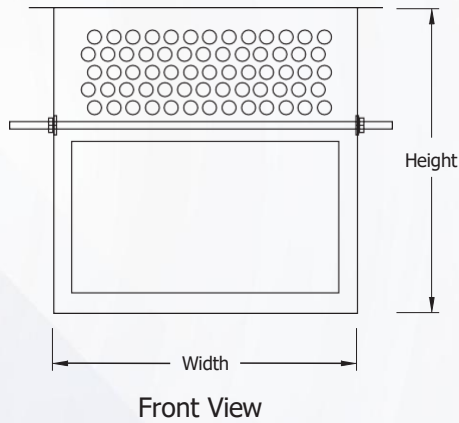
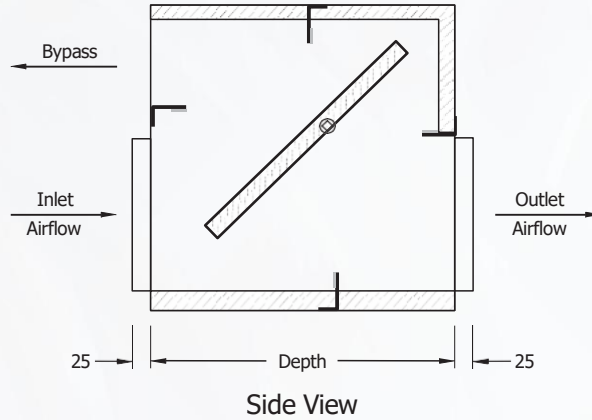
24 VAC/DC modulating



#### 4. Room thermostat

A 24 VAC Thermostat for VAV systems offers modulating PI control based on room or return air temperature. It supports a DC 0–10 V actuator, AC 230 V heater (ON/OFF), and automatic or manual heating/cooling changeover. Features include Comfort, Economy, and Protection modes, two multifunctional inputs, adjustable parameters, and limits for setpoints and airflow signals. It also supports output signal DC 0–10 V

## 5. Selection



### BYPASS TERMINAL UNITS MODEL AE240

Dimensional Data							
Item Code	Flow Rate		Width (mm)	Height (mm)	Depth (mm)	Duct Connection (mm)	
	Max. CFM	Max. L/S				Inlet	Outlet
VAV-AE24004	400	189	400	400	400	350x200	350x200
VAV-AE24007	700	330	500	400	400	450x200	450x200
VAV-AE24011	1100	519	600	400	400	550x200	550x200
VAV-AE24016	1600	755	550	500	500	500x250	500x250
VAV-AE24021	2100	991	700	500	500	650x250	650x250
VAV-AE24028	2800	1322	800	500	500	750x250	750x250
VAV-AE24035	3500	1652	900	500	500	850x250	850x250