


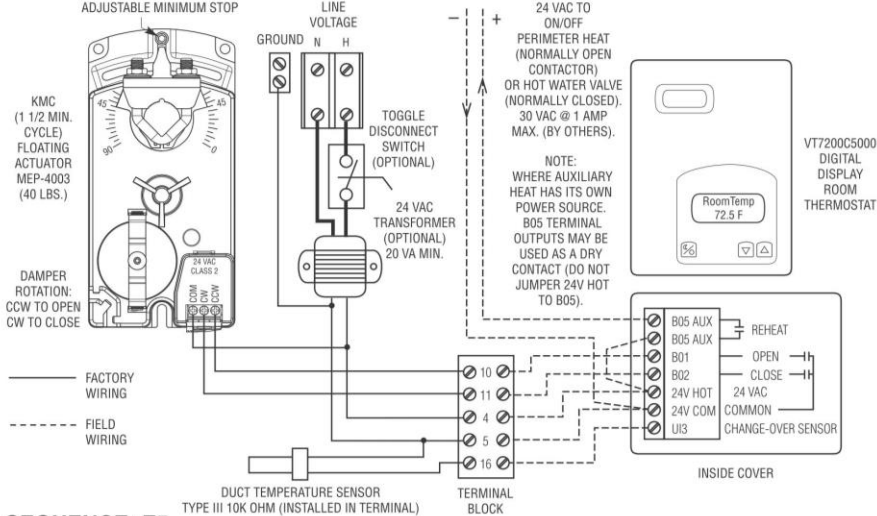
APPENDIX "B"

LOW PRESSURE BY-PASS VAV BOX CONTROLS

This data and information in this appendix is provided for informational purposes only. The data and information is provided "as is" with no guarantee as to its accuracy.



ANALOG ELECTRONIC CONTROL
BYPASS TERMINAL UNIT
PRESSURE DEPENDENT
MODEL: A3400 AND A34RW E5



CONTROL SEQUENCE: E5
AUTOMATIC HEATING/COOLING CHANGEOVER WITH ON/OFF AUXILIARY HEAT (PERIMETER) OR HOT WATER REHEAT (VARIABLE AIR VOLUME)

Advanced micro-computer electronics and PI control algorithms provide precise temperature control. The thermostat provides a true multi-position modulating output to a tri-state floating actuator. A time proportioning on/off output signal based on a 15 minute duty cycle controls the auxiliary heat. This eliminates wasted energy caused by typical on-off cycling with conventional thermostats resulting in significant energy savings and superior comfort. Control accuracy is $\pm 0.4^{\circ}\text{F}$ ($\pm 0.2^{\circ}\text{C}$) around set point. The room occupant is able to reduce the set point to the lowest comfortable setting. A mechanical air volume minimum stop is provided (field set).

Sequence of Operation:
This arrangement is for systems supplying cool air in summer and hot air in winter. A duct temperature sensor senses inlet temperature and automatically reverses control action when supply air is above 78°F (26°C).

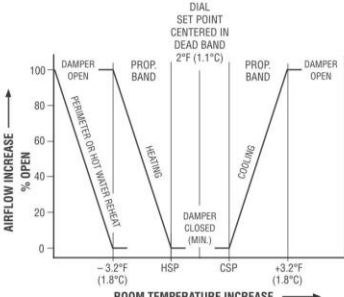
Cooling Mode:
Supply air system in cooling mode (below 75°F (24°C)). On a rise in room temperature above set point, the bypass damper will modulate open, increasing the flow of cool air to the room, closing the bypass at the same time. On a fall in room temperature below set point, the bypass damper will modulate closed, reducing the flow of cool air into the room and opening the bypass at the same time. If room temperature continues to fall, the thermostat will energize the control relay/valve of the auxiliary perimeter heating (electric or hot water) or hot water terminal unit hot water coil valve for reheat.

Heating Mode:
Supply air system in heating mode (above 78°F (26°C)). On a rise in room temperature above set point, the bypass damper will modulate closed, reducing the flow of warm air into the room to maintain set point and opening the bypass. On a fall in room temperature below set point, the bypass damper will modulate open, increasing the flow of warm air into the room to maintain the set point and closing the bypass at the same time. If room temperature continues to fall, the thermostat will energize the control relay/valve of the auxiliary perimeter heating (electric or hot water) or terminal hot water coil valve for supplementary heat.

Note:
The room thermostat requires field configuration. See supplied VT7200 series installation guide.

Options and Accessories:

- ☐ 24 VAC Control Transformer
- ☐ Toggle disconnect switch
- ☐ Special features: _____



SCHEDULE TYPE:				
PROJECT: test				
ENGINEER:				
CONTRACTOR:				

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 29 - 16	3400	8 - 24 - 15	3400CD-E5

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