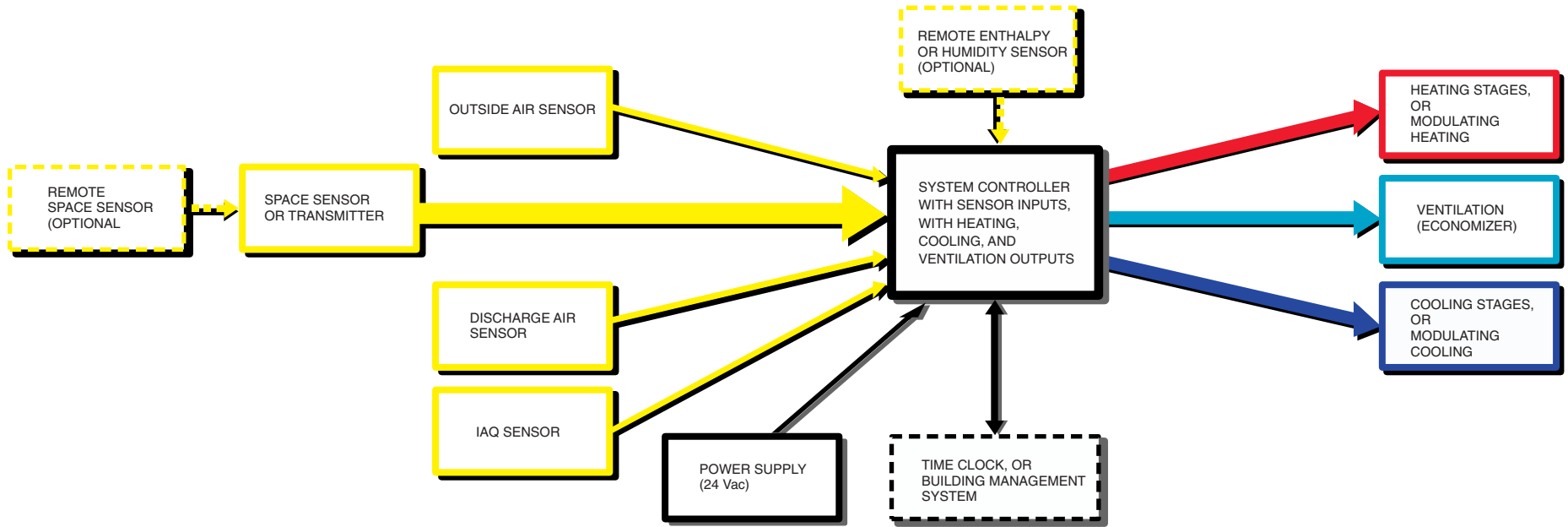


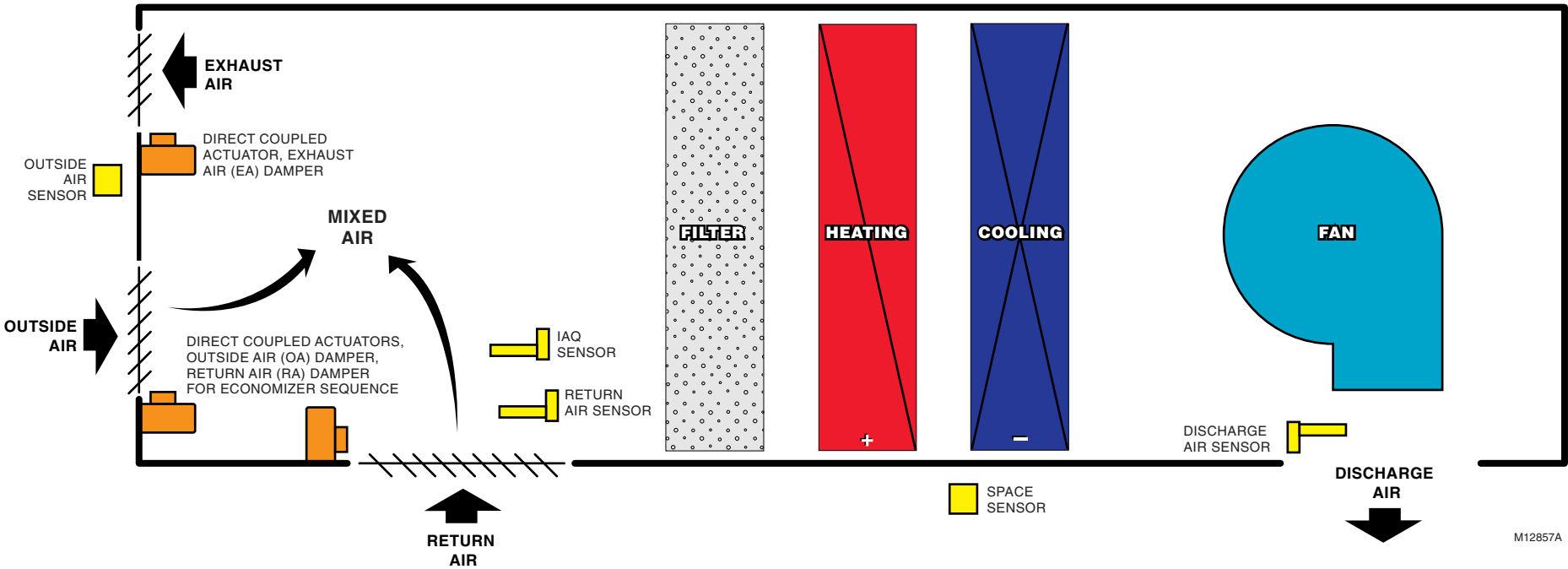


- Stand-alone or expandable. LONMARK® compliant, Echelon® LONWORKS® protocol-compatible (on LONWORKS® Bus, Q7750 Zone Manager), free topology.
- Controls heating and cooling stages and economizer, using either Series 60 Floating pulse width modulation (W7750B, C only), 4-20mA modulating (W7750C only).
- Proportional Integral Derivative (PID) control and adaptive control for discharge air setpoints.
- Inputs for space temperature, Outside Air (OA), Return Air (RA), Mixed Air (MA), and Discharge Air (DA) W7750A.
- Additional inputs for (W7750B,C only) OA humidity, RA humidity, OA enthalpy, RA enthalpy, air differential pressure, CO<sub>2</sub>, fan, filter, smoke detect, Shutdown, occupied and bypass.

### Functional Block Diagram



### Duct Diagram



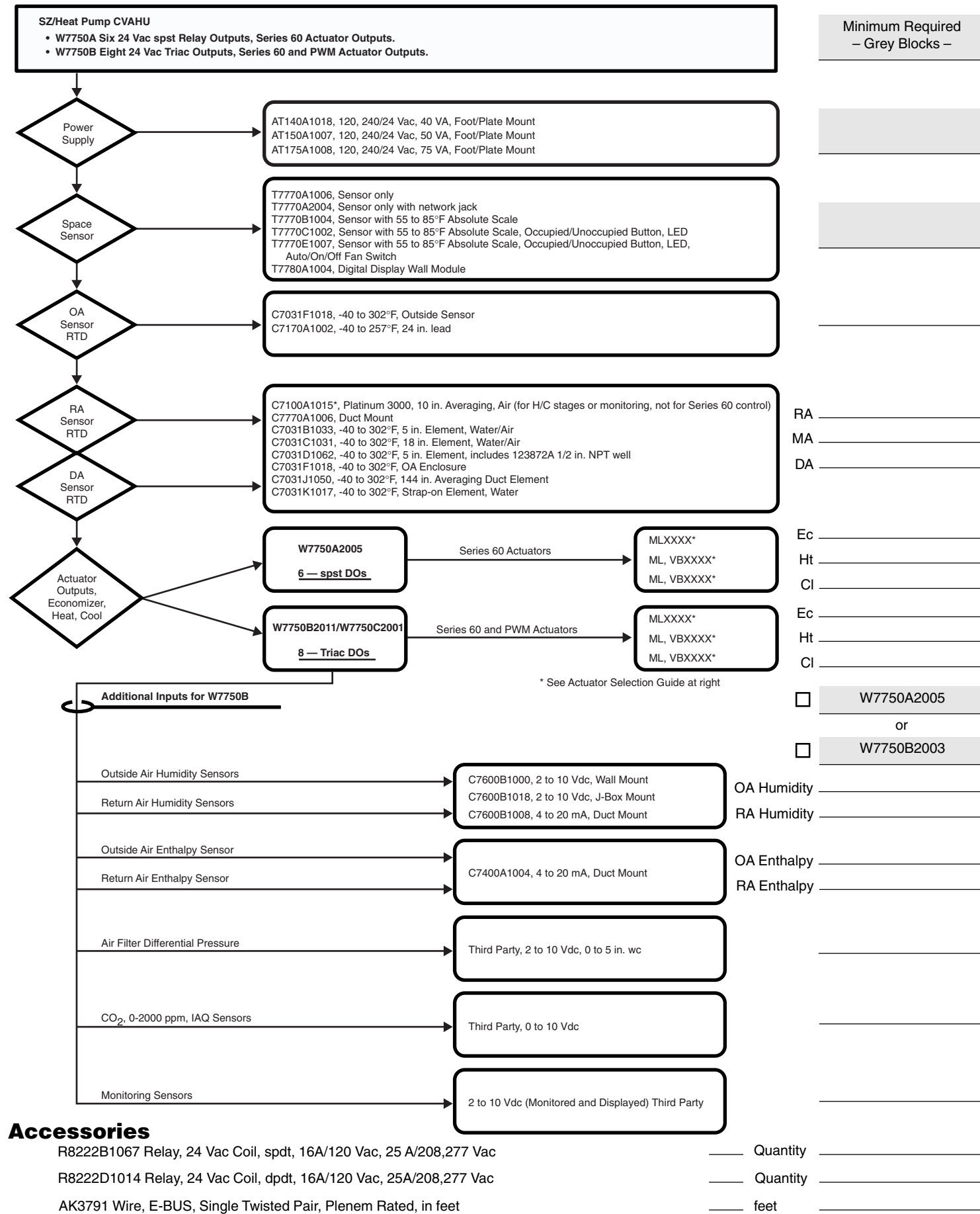
- KEY**
- INPUTS
  - ACTUATORS/VALVES
  - VENTILATION/FAN
  - HEATING
  - COOLING

## Excel 10 W7750A,B CVAHU/Heat Pump Controller

### APPLICATION SELECTION GUIDE

- Rooftop Application
- Air Handler
- Cooling
  - Direct Expansion
  - Chilled Water Coil Valve
- Ventilation
  - Economizer (Econ) Actuator
  - Make-Up Air (MUA)
- Heating
  - Gas Fired
  - Electric
  - Hot Water (HW) Coil Valve
  - Steam (Stm) Coil Valve
  - ReHeat (ReH) Coil Valve
- Indoor Air Quality (IAQ)
  - CO<sub>2</sub>
  - Other
- Energy Management
  - TOD, Occupied/UnOccupied
  - Building Management
  - Communication

## Excel 10 CVAHU Application/Selection Decision Matrix



## Accessories

R8222B1067 Relay, 24 Vac Coil, spdt, 16A/120 Vac, 25 A/208,277 Vac

R8222D1014 Relay, 24 Vac Coil, dpdt, 16A/120 Vac, 25A/208,277 Vac

AK3791 Wire, E-BUS, Single Twisted Pair, Plenum Rated, in feet

### Job Identification:

63-7046—2 Rev. 5-01

## Honeywell CVAHU Actuator/Valve Selection

See Honeywell Valve Selection Guide 63-8038 for additional valves

### DAMPER ACTUATOR SELECTION, Series 60 Floating, Non-Spring Return - Direct Coupled

24 Vac, -30 to 150°F Ambient Temperature, 90 degree, 90 seconds, w/De-clutch

Actuator	Torque (lb-in.)	Spring Return	Notes	Accessories
ML6161B2024	35	No		ML6161B
ML6174B2019	70			#4074EVK Short Shaft Kit
ML6174C2026			w/Two Auxillary Switches	#4074ENJ 45 & 60 Stop Pin & 3/8 Shaft Adapter
ML6184A1003 <sup>a</sup>	150			#7640QW Metal Enclosure for Conduit Connection & Plenum Rating
ML6184C1001 <sup>a</sup>			w/Feedback Potentiometer	#200976A 500ohm Feedback Pot., #200976C 1000ohm Feedback Pot.
ML6194A1002 <sup>a</sup>	300			#201052A 1-SPDT Auxillary Switch, #201052B 2-SPDT Auxillary Swtch
ML6194F1007 <sup>a</sup>			w/Two Auxillary Switches	
				ML6174, 75, 84, 85, 94, 95
ML6175A1001 <sup>a</sup>	25	Yes		#205753 3/8 in. Hub Sleeve, #205758 5/8 in. Hub Sleeve
ML6175F1006 <sup>a</sup>			w/Two Auxillary Switches	#205820A 3-Point Mounting Kit
ML6185A1000 <sup>a</sup>	50			#205830A Crank Arm Assembly
ML6185F1005 <sup>a</sup>			w/Two Auxillary Switches	#205840A Tandem Mount Kit
ML6195A1009	144			#205850A End Stop Kit

<sup>a</sup>Standard XL10 switches 24V com. Reverse 24V+ and 24V com to prevent motor damage.

## BALL VALVE SELECTION, Series 60 Floating, Non-Spring & Spring Return

24 Vac, -30 to 150°F Ambient Temperature

Valve Assembly	Sweat Size (in.)	Cv	Ball Valve	Actuator	Spring Return	Close-off (psi)	Notes
VB34A1072	1/2 FP	15	VB30A1039	ML6161B2024	No	150	2-way FP = Full Port; RP = Reduced Port NPT Pipe Thread
VB34A1536	1 FP	56	VB30A1070	ML6184A1003 <sup>a</sup>	No	150	
VB34A1544	1-1/4 RP	48	VB30A1088		No	150	
VB34A2088	1-1/4 FP	125	VB30A1096	ML6194A1002 <sup>a</sup>	No	150	
VB34A2104	1-1/2 FP	177	VB30A1112		No	150	
VB34B1014	1/2 RP	5.4	VB30B1004	ML6161B2024	No	150	3-way FP = Full Port; RP = Reduced Port NPT Pipe Thread
VB34B1162	1 RP	14	VB30B1020	ML6184A1003 <sup>a</sup>	No	150	
VB34B1170	1-1/4 RP	21	VB30B1038		No	150	
VB34B1477	1-1/4 RP	21	VB30B1095	ML6194A1002 <sup>a</sup>	No	150	
VB34B1485	1-1/2 RP	34	VB30B1103		No	150	
VB34B1493	2 RP	47	VB30B1053		No	150	
VB35A1020	1/2 RP	4	VB30A1187	ML6185A1000 <sup>a</sup>	Yes	150	2-way FP = Full Port; RP = Reduced Port NPT Pipe Thread
VB35A1038	1/2 FP	15	VB30A1195		Yes	150	
VB35A1046	3/4 RP	30	VB30A1203		Yes	150	
VB35A1723	3/4 FP	51	VB30A1211	ML6195A1009	Yes	150	
VB35A1731	1 RP	43	VB30A1062		Yes	150	
VB35A1749	1-1/4 RP	48	VB30A1088		Yes	150	
VB35B1003	1/2 RP	5.4	VB30B1061	ML6185A1000 <sup>a</sup>	Yes	150	3-way FP = Full Port; RP = Reduced Port NPT Pipe Thread
VB35B1102	3/4 RP	12	VB30B1079		Yes	150	
VB35B1326	1 RP	14	VB30B1020	ML6195A1009	Yes	150	
VB35B1334	1-1/4 RP	21	VB30B1038		Yes	150	

<sup>a</sup>Standard XL10 switches 24V com. 24V+ and 24V com should be reversed to prevent motor damage.

## GLOBE VALVE & ACTUATOR SELECTION, Series 60 Floating, Electronic, Spring & Non-Spring Return

24 Vac, 14 to 122°F (ML6421/ML6425), 32 to 132°F (ML6874/ML7984) Ambient Temperature

2-10 Vdc, 4-20 ma									
Series 60 Floating			Series 90, Electronic						
Spring Return	Non-Spring Return	Spring Return	Non-Spring Return	Close-off Rating (psid)	Size (in.)	CV	Notes	Accessories	
V5011N1024	ML6421A1009	ML6425A3032 stem up on power failure	ML7421A1008	ML7425A3031 stem up on power failure	230	1/2 NPT	1.85	2-way	09011786 V5011 Valve Repack Kit
V5011N1032							2.9		
V5011N1057						3/4 NPT	7.3		
V5011N1065						230/163	1 NPT		
V5011N1073	ML6425B3013 stem up down power failure	ML7425B3012 Stem up down power failure		230/104	1-1/4NP	18.7	3-way	Dual Aux. Sw. 43191680-002	
V5013N1081						221/67			1-1/2NP
V5013N1030				230	1/2 NPT	2.9			
V5013N1048									4.7
V5013N1055					3/4 NPT	7.3			
V5013N1063				230/163	1 NPT	11.7			
V5013N1071				230/104	1-1/4NP	18.7			
V5013N1089				221/67	1-1/2 NP	29.3			