

Commercial Components Technical Bulletin

SUBJECT: Replacement of W973 and M9185 motors with W7220A1000 (JADE) and M7215A1008 OR M7285A1045	Ref. Number	
	Issue Date	05/15/13
	Author	Adrienne Thomle
Suggested Model Number: W973	Date Codes Affected: N/A	

Step by step guide to assist you in successful replacement of the W973 economizer and M9185 Mod Motor with a W7220 JADE economizer controller and M7215 black motor or new M9185 Mod motor. You will also need to replace the thermostat.

1. To replace The W973 logic panel and the T7067 thermostat with a programmable thermostat you will need to replace the following parts.
 - a. If using **2h/2c** you can use the TB8220U1003/TB7220U1012 TH8320R1003 Red Link Vision Pro or T7350B1002 or T7350D1008 or the T7351F2010 or Prestige 2.0 (THX9321R5051 or YTHX9421R5085BB; or WW or WG or SG)
 - b. If using **3h/3c** you can use the T7350D1008 or the T7351F2010 or Prestige 2.0 (THX9321R5051 or YTHX9421R5085BB; or WW or WG or SG).
 - c. If using **0 or 2h/4c** you can use T7350D1008 or the T7351F2010 or Prestige 2.0 (YTHX9421R5085BB; or WW or WG or SG).

TB8220

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-2625.pdf>

TB7220

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-2635.pdf>

TH8320 Redlink

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/68-0000s/68-0312.pdf>

T7350

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-2605.pdf>

T7351

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-2666.pdf>

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Prestige 2.0; THX9321R5051 or YTHX9421R5085BB; or WW or WG or SG

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/68-0000s/68-0311.pdf>

- d. If using **modulating heating /cooling and only 2h/1c or 1h/2c** stages then the T7350M1008 can be used.
- e. If using any **more stages** then cannot use commercial thermostat to replace. You may be able to re-control using T775 controllers. These would have two periods per day. Depending on the system it may take a combination of T775s to accomplish this.

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-7147.pdf>

<http://customer.honeywell.com/resources/techlit/TechLitDocuments/63-0000s/63-1318.pdf>

When using these thermostats to replace W973 the remote sensor will have to be replaced (if used).

The transformer that powered the W973 can be used to power the thermostat.

Relays are required for each stage of heating and cooling.

The relays coil side is connected to the output of the thermostat on one side and transformer common on the other side.

The contacts of the relays are connected to the wires for each stage from the W973 and the fan.

DP1025A5005 or R8228A1014 relays can be used.

In addition to the W7220A1000 Jade economizer you will need the C7400S1000 enthalpy and C7250A1001 mixed air sensors.

2. Step by step guide to assist you in successful replacement of the W973 economizing section and M9185 Mod Motor with a W7220 JADE economizer controller and M7215 black motor or new Mod Motor:

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- a. Remove all wires from the W973 and remove it from the unit.
- b. Remove all sensors from the unit that are connected to the W973.
- c. Remove the Mod motor from the unit and using the same mounting holes mount a M7285A1045 Mod Motor **OR** M7215A1006 black motor in its place. Using a M7215 follow step d and when using a M7285 motor follow step e.
- d. Mount Jade on the inside of the Rooftop unit where it will be easy to read the display and to change the settings.
- e. Wire JADE to M7215 using three new wires and ¼ in quick connects on motor end of wires:

M7215 wire termination	W7220 Wire termination
TR	ACT 24V (hot)
TR1	ACT COM
IN (+)	ACT (2-10V)

- f. Wire JADE to M7285 using three new wires and ¼ in quick connects on motor end of wires:

M7285 wire termination	W7220 Wire termination
T1	ACT 24V (hot)
T2	ACT COM
(-)	ACT COM
(+)	ACT (2-10V)

Terminate wires from the thermostat to the Jade:

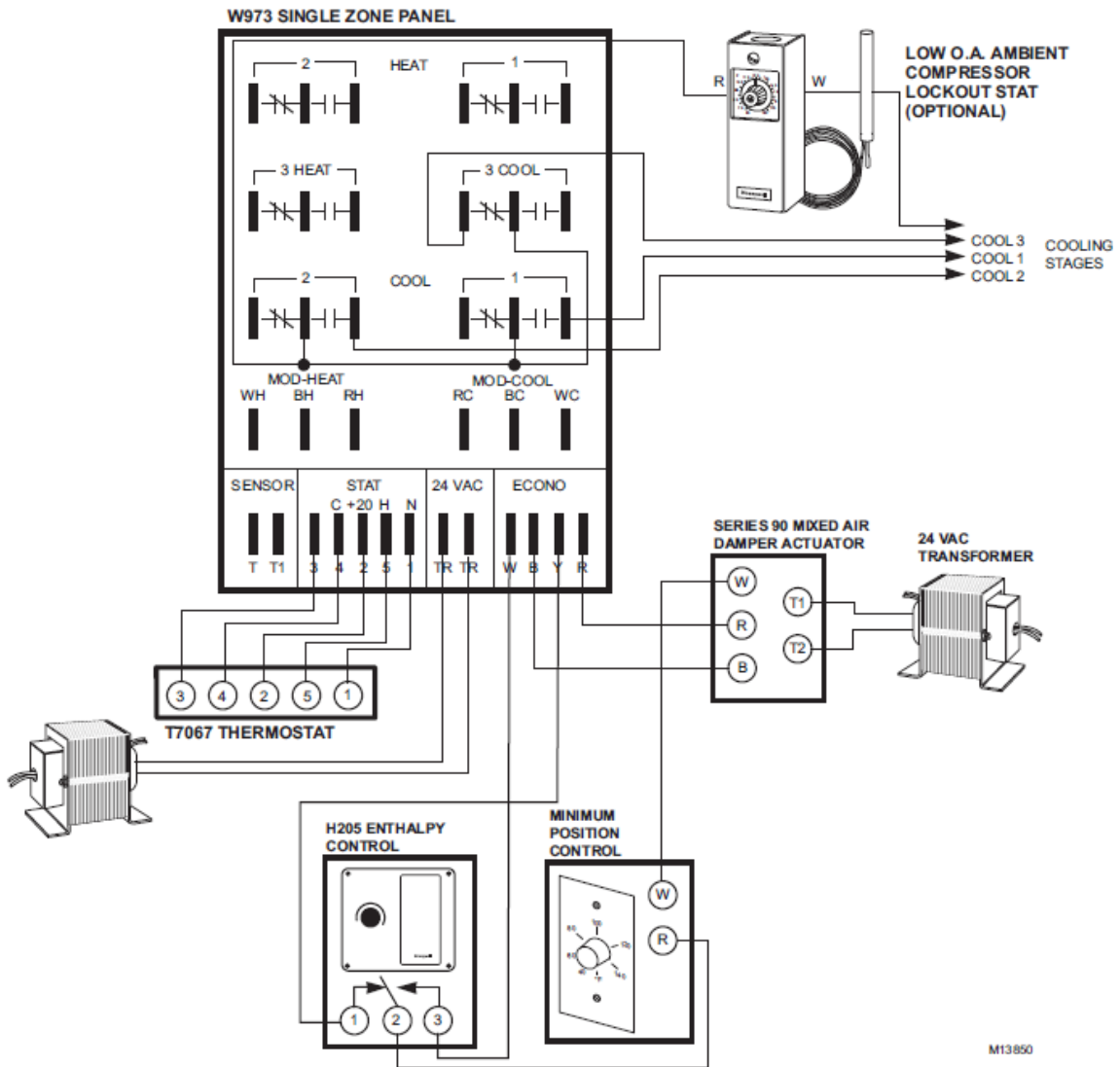
Thermostat terminations	W7220 wire termination
Y1 out	Y1-In
NA	Y1-Out
Y2 out	Y2-In
NA	Y2-Out
R	R
C	C
OCC out or economizer out	OCC (from thermostat or

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	program as "always")
Sensor terminations	
C7250A1001 sensor (2 wires non-polarity)	MAT sensor (C7250A1001)
C7250A1001 (OAT) or C7400S1000 (enthalpy – S-Bus)	OAT or S-Bus
Other terminations	
	E-GND (earth ground the controller using this terminal)

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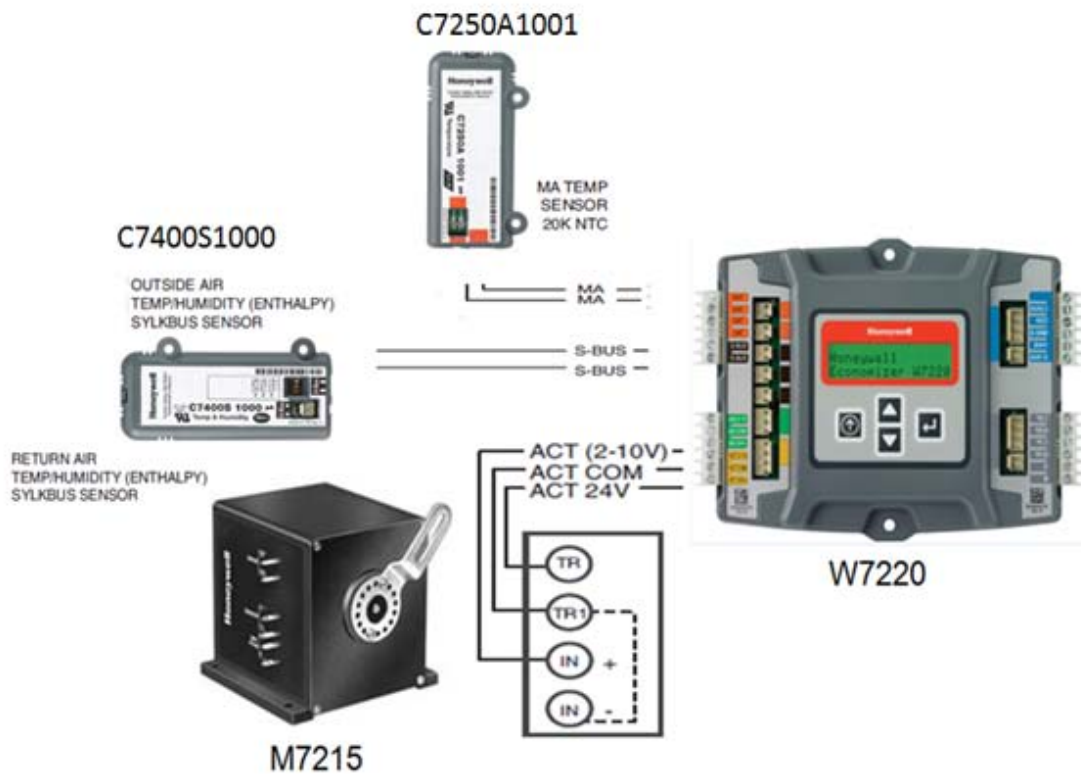
OLD W973 WIRING DIAGRAM



M13850

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NEW W7220 WIRING DIAGRAM



There is no longer need for Minimum Position and Changeover Curve (A, B, C, D) potentiometers. The changeover curve boundaries and minimum position are set using the LCD display menu item "Setpoints" and the 4 buttons on JADE.

For programming Jade refer to the Installation Instructions (62-0331) supplied with the Jade.