

Commercial Components Technical Bulletin

SUBJECT: Replacement of W859F with W7220A1000 (JADE) and M7285A1045	Ref. Number	
	Issue Date	9/11/12
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Suggested Model Number: W859	Date Codes Affected: N/A	

Step by step guide to assist you in successful replacement of the W859 economizer with a W7220 JADE economizer controller and M7285A1045 motor:

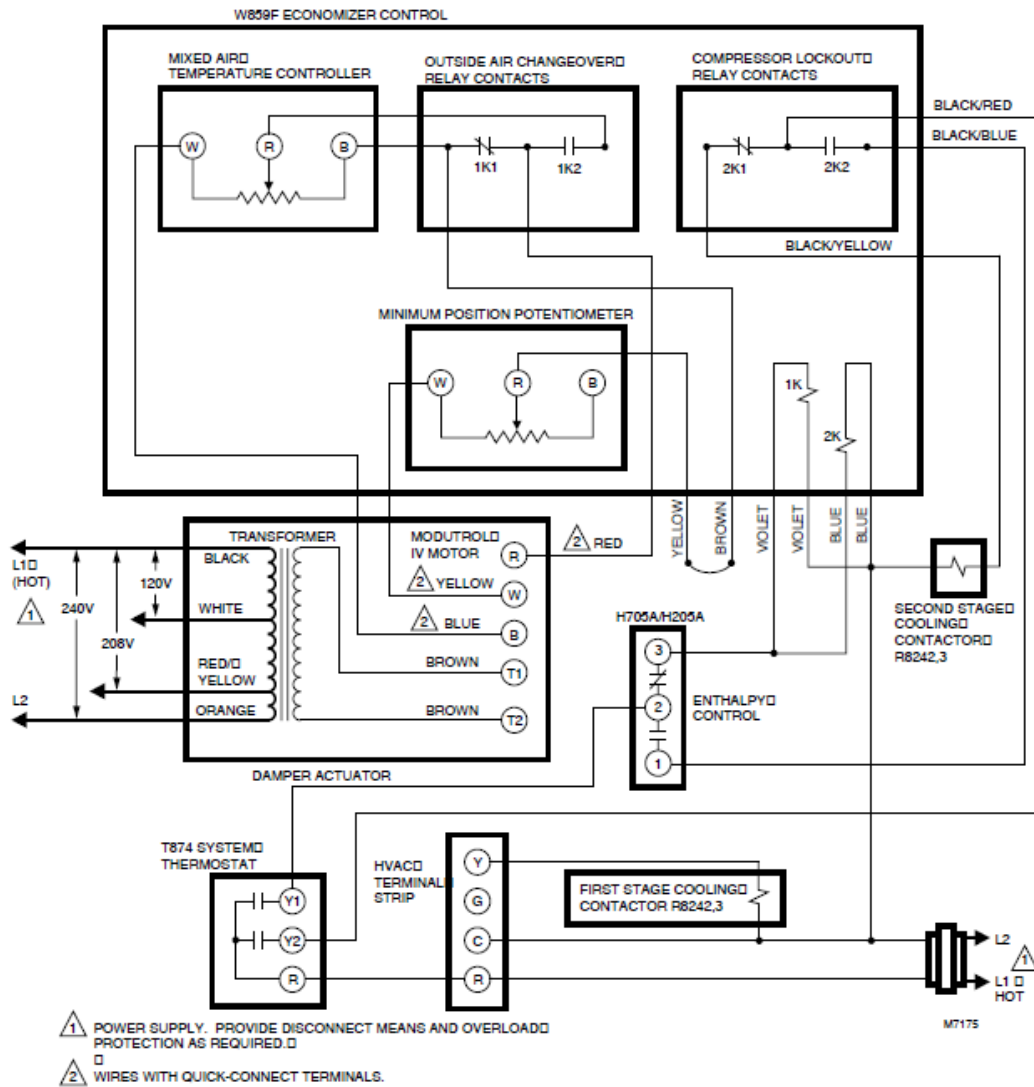
1. Remove all wires from the W859. Mark each wire with the terminal designation (e.g., H205 violet in, violet out, T1, T2 etc.) as it is removed from the W859.
2. Remove the W859 including motor and using the same mounting holes mount the M7285A1045 motor in its place.
3. Mount Jade on the inside of the Rooftop unit where it will be easy to read the display and to change the settings.
4. Terminate wires removed from the W859 to the Jade:

W859F wire termination	W7220 wire termination
H205 terminal 3 = violet in	Y1-In
H205 terminal 3 = violet out	Y1-Out
H205 terminal 1 = black/blue	Y2-In
H205 terminal 1 = black/red	Y2-Out
	R (use system transformer)
	C (use system transformer)
Internal MAT	MAT*
Internal OA changeover	OAT or S-Bus*
R	ACT COM
W	ACT (2-10V)
B	Not terminated to W7220

*Sensor to be changed

5. Replace T874 thermostat with a two stage commercial programmable thermostat.
6. Add earth ground to the W7220 Jade controller.

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The M7285A1045 is powered with transformer connected to T1 and T2 (L1 and L2 as shown above). The MAT internal to the W859 is replaced with a C7250A1001 sensor connected to the MAT on the W7220. Add a C7400S1000 S-Bus sensor for the outdoor air changeover. Use separate transformers for the motor and for W7220. The W7220 must be earth grounded.

Old Sensor	Description	New Sensor
C7046A	Discharge Air	C7400S1000
C7150B	Mixed Air	C7250A1001
C7400	Solid State Enthalpy	C7400S1000
C7660	Solid State Dry Bulb	C7250A1001

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There is no longer a 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).