

## Testing Fan Motors

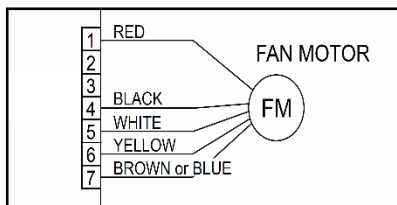
### Some examples of a fan motor error on most models:

5x Operation & 6x Timer / 6x Operation & 2x Timer / 6x Operation & 3x Timer / 9x Operation & 7x Timer / 5x Operation & 1x Timer / 6x Operation & continuous Timer blink / Continuous Operation blink & 14x Timer / E:973 / 15x LED 1 (condenser) / 16x LED 1 / E:1b (wired remote) / E:51 (wired remote) / E:97 (wired remote) / E:12 (wired remote)

- Use caution when checking DC volts for fan motors.
- When checking ohms, the fan motor must be de-energized.
- Always check the 3.15 amp fuse on the control board with a continuity test. (If fuse is open replace control board and fan motor).
- Unplug fan motor from control board and spin fan blade by hand to check for any resistance.
- It should turn/spin freely over 2 full revolutions.
- Always ohm fan motor when replacing a Main Control Board.
- When ohming fan motor use a meter that has ohm rating of 400k or higher. Unplug fan motor and place black lead of meter on black wire of fan motor and red lead of meter will go to the other fan leads one at a time. See attached charts for proper ohm readings for your specific motor.
- When checking DC volts for fan motor to determine if board is the problem or fan motor is the problem use the charts below.

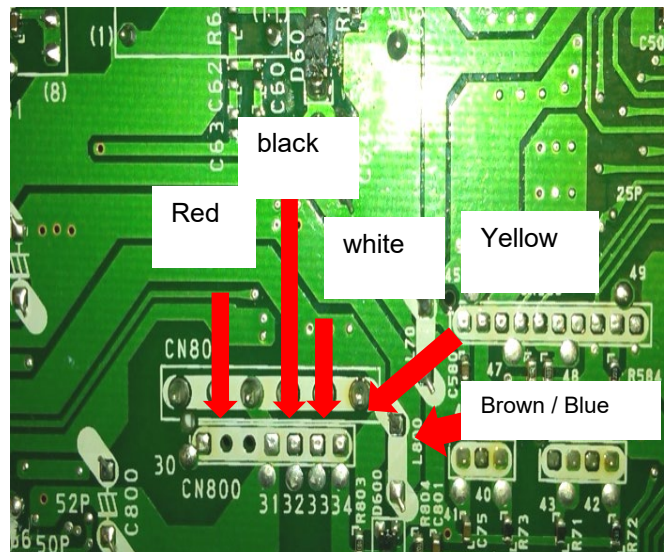
#### Check Point 4 : Check Output Voltage of Main PCB

- Check outdoor unit circuit diagram and the voltage. (Measure at Main PCB side connector)



Read wire	DC voltage
Red - Black	290V (AC115V-10%)~ 360V (AC115+10%)
White - Black	15±1.5V

▶ **If the voltage is not correct, replace Main PCB.**





# Service Tips

Model	Red-Black	White-Black	Yellow-Black	Brown-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black																																																						
<b>Motor MFE-71TVAL</b> AOU9RLFC AOU9RLFF AOU9RLFFH AOU9RLS AOU9RLS2 AOU9RLS2H AOU9RLS3 AOU9RLS3H AOU12RLFC AOU12RLFF AOU12RLFFH AOU12RLS AOU12RLS2 AOU12RLS2H AOU12RLS3 AOU12RLS3H AOU15RLS AOU24CL1	300K-OL	110K-130K	70K-90K	Mega Ohms-OL	AOU15RLFF AOU15RLFFH AOU15RLS2 AOU15RLS2H AOU15RLS3 AOU15RLS3H AOU18RLB AOU18RLFC AOU24RLB  <b>Motor MFE-71TVL</b>	300K-OL	110K-130K	75K-100K	Mega Ohms-OL																																																						
					Model					Red-Black	White-Black	Yellow-Black	Brown-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black																																													
					<b>Motor MFE-60TVT</b> AOU18RLXFW AOU18RLXFWH AOU18RLXFW1 AOU18RLXFZ AOU18RLXS AOU24RLXFW AOU24FLXFWH AOU24RLXFW1 AOU24RLXFZ AOU24RLXS AOU30CLX1 AOU30RLX AOU30RLXB AOU36CLX1 AOU36RLXB					300K-OL	45K-55K	120K-140K	Mega Ohms-OL	AOU15RLQ AOU18CL AOU18RL AOU18RLQ  <b>Motor MFE-18ROM</b>	300K-OL	1K-2K	190K-210K	Mega Ohms-OL																																													
														Model					Red-Black	White-Black	Yellow-Black	Blue-Black																																									
														<b>Motor MFE-45VVT_White (MFE-45ROM_Black)</b> AOU18RLX AOU18RLXFZH AOU24RLX AOU24RLXFZH AOU24RLXQ AOU24RML AOU24RML1 AOU30CLX AOU30RLXQ AOU30RLXEh AOU36CLX AOU36RLX AOU36RLXFZ AOU36RLXFZ1 AOU36RML AOU36RML1 AOU42RLX					300K-OL	40K-100K (1.2K)	120K-140K (190K-210K)	Mega Ohms-OL	AOU24CL AOU24RL AOU24RLQ  <b>Motor MFE-24ROM</b>	300K-OL	1K-2K	190K-210K	Mega Ohms-OL																																				
																							Model					Red-Black	White-Black	Yellow-Black	Brown-Black																																
																							<b>Motor MFE-45VVT_White (MFE-45ROM_Black)</b> AOU18RLX AOU18RLXFZH AOU24RLX AOU24RLXFZH AOU24RLXQ AOU24RML AOU24RML1 AOU30CLX AOU30RLXQ AOU30RLXEh AOU36CLX AOU36RLX AOU36RLXFZ AOU36RLXFZ1 AOU36RML AOU36RML1 AOU42RLX					300K-OL	40K-100K (1.2K)	120K-140K (190K-210K)	Mega Ohms-OL	AOU9RLFW  <b>Motor MFE-28TVAL</b>	300K-OL	120K-150K	80K-100K	Mega Ohms-OL																											
																																Model					Red-Black	White-Black	Yellow-Black	Brown-Black																							
																																<b>Motor MFE-45VVT_White (MFE-45ROM_Black)</b> AOU18RLX AOU18RLXFZH AOU24RLX AOU24RLXFZH AOU24RLXQ AOU24RML AOU24RML1 AOU30CLX AOU30RLXQ AOU30RLXEh AOU36CLX AOU36RLX AOU36RLXFZ AOU36RLXFZ1 AOU36RML AOU36RML1 AOU42RLX					300K-OL	40K-100K (1.2K)	120K-140K (190K-210K)	Mega Ohms-OL	AOU12RLFW  <b>Motor MFE-40WL</b>	300K-OL	30K-45K	80K-100K	Mega Ohms-OL																		
																																									Model					Red-Black	White-Black	Yellow-Black	Brown-Black														
																																									<b>Motor MFE-45VVT_White (MFE-45ROM_Black)</b> AOU18RLX AOU18RLXFZH AOU24RLX AOU24RLXFZH AOU24RLXQ AOU24RML AOU24RML1 AOU30CLX AOU30RLXQ AOU30RLXEh AOU36CLX AOU36RLX AOU36RLXFZ AOU36RLXFZ1 AOU36RML AOU36RML1 AOU42RLX					300K-OL	40K-100K (1.2K)	120K-140K (190K-210K)	Mega Ohms-OL	AOU9RL  <b>Motor MFE-12TVBM</b>	300K-OL	1K-2K	190K-210K	Mega Ohms-OL									
																																																		Model					Red-Black	White-Black	Yellow-Black	Brown-Black					
																																																		<b>Motor MFE-12ROAM</b> AOU9RLQ AOU12RLQ					300K-OL	1K-2K	190K-210K	Mega Ohms-OL	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
																																																											Model				
<b>Motor MFE-22AVL</b> AOU9RL2 AOU12RL2	300K-OL	115K-145K	75K-100K	Mega Ohms-OL		AOU9RL2 AOU12RL2  <b>Motor MFE-22AVL</b>	300K-OL	115K-145K	75K-100K																																																		Mega Ohms-OL				
						Model																																																									
					<b>Motor MFE-45VWN</b> AOU48RLXFZ1	300K-OL				40K-60K	125K-150K	Mega Ohms-OL	Model		Red-Black	White-Black	Yellow-Black	Brown-Black																																													
													Model																																																		
													<b>Motor MFE-60TVT (MFE-45VVT)</b> AOU18RGLX AOU24RGLX AOU30RGLX AOU36RGLX AOU42RGLX AOU48RGLX	300K-OL					45K-55K (40K-100K)	120K-140K (120K-140K)	Mega Ohms-OL	AOU36RLXFZH AOU45RLXFZ  <b>MFE-2AZVA2N</b>		Mega Ohms-OL	51M	151K	Mega Ohms-OL																																				
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# Service Tips

Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ASU7RLF ASU9RL ASU9RLF ASU12RL ASU12RLF ASU15RLS <b>Motor MFD-12YYAN</b>	300K-OL	30K-120K	225K-260K	Mega Ohms-OL	ASU18RLF ASU18RLXS ASU18RLB ASU24RLB ASU24CL ASU24CL1 ASU24RL ASU24RLF ASU24RLQ ASURLXQ ASU24RLXS ASU30CLX ASU30CLX1 ASU30RLX ASU30RLXB ASU30RLXQ ASU36CLX <b>Motor MFD-50RON</b>	300K-OL	40K-60K	140K-160K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
ASU9RLQ ASU9RMLQ ASU12RLQ ASU12RMLQ ASU15RLQ ASU18RLQ ASU18CL ASU18RL ASU18RMLQ	300K-OL	1K-2K (40K-60K)	90K-120K (140K-160K)	Mega Ohms-OL					
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
ASU9R2 ASU9RQ ASU9CQ ASU12R2 ASU12RQ ASU12CQ <b>Motor MFD-12POM</b>	300K-OL	25K-50K	280K-320K	Mega Ohms-OL	AUU7RLF AUU9RML AUU9RLF AUU12RML AUU12RLF AUU18RML AUU18RLF <b>Motor MFF-24VVL</b>	300K-OL	80K-100K	80K-110K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ASU7RLF1 ASU9RLF1 ASU12RLF1 ASU15RLF1 <b>Motor MFD-12CYAN</b>	OL	110K-140K	260K-310K	OL	ASU9RLS3 ASU12RLS3 ASU15RLS3 <b>Motor MFD-W60XA2F</b>	2M-3M	30K-50K	100K-105K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
AGU9RLF AGU12RLF AGU15RLF <b>Motor MFD-14SXAN_upper (MFD-14TXAN_lower)</b>	2M/3M  OL	30K-35K  45K-50K	155K-160K  150K-155K	OL  OL	ASU36RLXB ASU36CLX1 <b>Motor MFD-71TXAN</b>	OL	40K-60K	140K-170K	OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
ASU9RLS2 ASU12RLS2 ASU15RLS2 <b>Motor MFD-12TYL</b>	300K-OL	100K-125K	240K-265K	Mega Ohms-OL	ARU9RLF ARU12RLF <b>Motor MFG-14WV</b>	300K-OL	20K-50K	80K-110K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Brown-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ARU18RLF ARU24RLF <b>Motor MFG24WV</b>	300K-OL	25K-55K	70K-100K	Mega Ohms-OL	ASU9RL2 ASU12RL2 <b>Motor MFD-12CWN</b>	300K-OL	100K-125K	240K-265K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
AUU18RGLX AUU24RGLX AUU36RGLX AUU30RGLX AUU42RGLX AUU48RGLX	300K-OL	45K - 55K (40k - 100K)	120K - 140K (120k - 140K)	Mega Ohms - OL					