

Testing Fan Motors

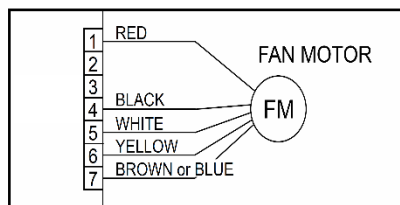
Some examples of a fan motor error on most models:

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.

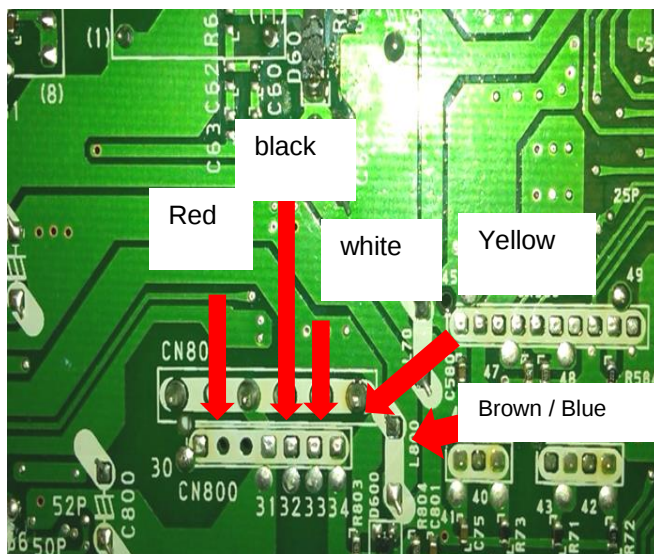
Check Point 4 : Check Output Voltage of Main PCB

- 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.



Model	Red-Black	White-Black	Yellow-Black	Brown-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
Motor MFE-71TVAL 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 Motor MFE-71TVL	300K-OL	110K-130K (90k-105k)	75K-100K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Brown-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
Motor MFE-60TVT AOU18RLXFW AOU18RLXFWH AOU18RLXFW1 AOU18RLXFZ AOU18RLXS AOU24RLXFW AOU24RLXFWH AOU24RLXFW1 AOU24RLXFZ AOU24RLXS AOU30CLX1 AOU30RLX AOU30RLXB AOU36CLX1 AOU36RLXB	300K-OL	45K-55K	120K-140K	Mega Ohms-OL	AOU15RLQ AOU18CL AOU18RL AOU18RLQ Motor MFE-18ROM	300K-OL	1K-2K	190K-210K	Mega Ohms-OL
					Model	Red-Black	White-Black	Yellow-Black	Blue-Black
					AOU9CQ AOU9R2 AOU9RQ AOU12CQ AOU12R2 AOU12RQ Motor MFE-12POM	300K-OL	1K-2K	190K-210K	Mega Ohms-OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
Motor MFE-45VVT/45VVBT_White (MFE-48ROM_Black) 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 Motor MFE-24ROM	300K-OL	1K-2K	190K-210K	Mega Ohms-OL
					Model	Red-Black	White-Black	Yellow-Black	Brown-Black
					AOU9RLFW Motor MFE-28TVAL	300K-OL	120K-150K	80K-100K	Mega Ohms-OL
					Model	Red-Black	White-Black	Yellow-Black	Brown-Black
					AOU12RLFW Motor MFE-40WL	300K-OL	30K-45K	80K-100K	Mega Ohms-OL
					Model	Red-Black	White-Black	Yellow-Black	Brown-Black
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	AOU9RL Motor MFE-12TVBM	300K-OL	1K-2K	190k-210K	Mega Ohms-OL
AOU9RLQ AOU12RLQ Motor MFE-12ROAM	300K-OL	1K-2K	190k-210K	Mega Ohms-OL	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
Model	Red-Black	White-Black	Yellow-Black	Brown-Black	AOU9RL2 AOU12RL2 Motor MFE-22AVL	300K-OL	115K-145K	75K-100K	Mega Ohms-OL
AOU48RLXFZ AOU48RLXFZ1 Motor MFE-45VVN	300K-OL	40K-60K	125K-150K	Mega Ohms-OL	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	AOU36RLXFZH AOU45RLXFZ AOUH30LUAH1 AOUG36LMA51 AOUG48LMA51 MFE-ZAZA2N (MFE-RA3VC3F)	Mega Ohms-OL (OL)	51K (40K-50K)	151K (130k-140k)	Mega Ohms-OL (OL)
AOU18RGLX AOU24RGLX AOU30RGLX AOU36RGLX AOU42RGLX AOU48RGLX Motor MFE-60TVBT (MFE-45VVT/45VVBT)	300K-OL	45K-55K (40K-100K)	120K-140K (120K-140K)	Mega Ohms-OL					

Service Tips

Model	Red-Black	White-Black	Yellow-Black	BL/BR-Black
AOUG09LZAS1 AOUG09LZAH1 AOUG12LZAS1 AOUG12LZAH1 AOUG15LZAS1 AOUG15LZAH1 AOUH12LUAS1 AOUH18LPAS1 AOUH18LUAS1 AOUH24LPAS1 Motor MFE-S60VD2F	OL	95k	88k	OL
Model	Red-Black	White-Black	Yellow-Black	BL/BR-Black
AOUH12LUAS1 AOUH18LUAS1 Motor: MFE-S60VD2F	-	-	-	-
Model	Red-Black	White-Black	Yellow-Black	BL/BR-Black
AOUH18LMAS1 AOUH24LMAS1 Motor: MFE-PA0VB3F FGA	OL	100k	140k	OL
Model	Red-Black	White-Black	Yellow-Black	BL/BR-Black
AOUH36LPAS1 AOUH30LPAS1 Motor:MFE-PA0VB3F	300k-OL	95k	135k	OL
Model	Red-Black	White-Black	Yellow-Black	BL/BR-Black
AOUH36LMAH1 AOUH48LMAH1 Motor:MFE-54AVAT	300k-OL	40k	130k	Meg-OL

Model	Red-Black	White-Black	Yellow-Black	BL/BR-Black
AOUH09LUAS1 AOUH09LMAH1 AOUH09LPAS1 AOUG09LMAS1 AOUG12LMAS1 AOUH12LMBS1 AOUH12LMAH1 AOUH12LMBH1 AOUH12LPAS1 Motor: MFE-W25VA2F	OL	60k-70k	80k-100k	OL

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 Motor MFD-12YYAN	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 Motor MFD-50RON	300K-OL	40K-60K	140K-160K	Mega Ohms-OL
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 Motor MFD-12POM	300K-OL	25K-50K	280K-320K	Mega Ohms-OL	AUU7RLF AUU9RML AUU9RLF AUU12RML AUU12RLF AUU18RML AUU18RLF Motor MFF-24VVL	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 Motor MFD-12CYAN	OL	110K-140K	260K-310K	OL	ASU9RLS3 ASU12RLS3 ASU15RLS3 ASU9RLS3Y ASU12RLS3Y ASU15RLS3Y Motor MFD-W60XA2F (Motor: MFD-W60XB2F)	2M-3M (300k-OL)	30K-50K (40k-50k)	100K-105K (100k-105k)	Mega Ohms-OL (Mega ohms-OL)
AGU9RLF AGU12RLF AGU15RLF Motor MFD-14SXAN_upper (MFD-14TXAN_lower)	Upper (Red) OL Lower (White) OL	40K-50K 40K-50K	150K-160K 150K-160K	OL OL	Model	Red-Black	White-Black	Yellow-Black	Brown-Black
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	ASU36RLXB ASU36CLX1 Motor MFD-71TXAN	OL	40K-60K	140K-170K	OL
ASU9RLS2 ASU12RLS2 ASU15RLS2 Motor MFD-12TYL	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	ARU9RLF ARU12RLF Motor MFG-14WV	300K-OL	20K-50K	80K-110K	Mega Ohms-OL
ARU18RLF ARU24RLF Motor MFG24WV	300K-OL	25K-55K	70K-100K	Mega Ohms-OL	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	ASU9RL2 ASU12RL2 Motor MFD-12CWN	300K-OL	100K-125K	240K-265K	Mega Ohms-OL
AUU18RGLX AUU24RGLX AUU36RGLX AUU42RGLX AUU48RGLX	300K-OL	45K - 55K (40k - 100K)	120K - 140K (120k - 140K)	Mega Ohms - OL					# 008 05/15/24 Page 4 of 5

Service Tips

Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ARU12RGLX ARU18RGLX ARU24RGLX Motor MFG-ZB0VA2N/MFG-ZA3VA2N	300K-OL	35K-55K	135K-155K	Mega Ohms-OL	ARU30RGLX ARU36RGLX ARU42RGLX ARU48RGLX Motor MFG-ZC8KC2P/MFG-ZC8KB2P	3.5	3.5	3.5	3.5
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ASU30RLE Motor: MFD-280XB3N	OL	47k	162k	OL	ASUH09LMAS ASUH12LMAS ASUG09LMAS ASUG12LMAS ASUH09LPAS ASUH12LPAS Motor:U50XD3F	OL	90k	100k	OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ASUG09LZAS ASUG12LZAS ASUG15LZAS ASUG09LZBS ASUG12LZBS ASUG15LZBS ASUH18LMAS ASUH18LPAS ASUH24LPAS Motor:MFD-U07XE3F	OL	93k	102k	OL	ABUH18LUAS Motor: MFH-X50VA2F	OL	25-30k	90-100k	OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ACUH07LUAS1 ACUH09LUAS1 ACUH12LUAS1 ACUH18LUAS1 Motor:MFF24VVL	300k-OL	120k-140k	80k-100k	OL	ABUH24LUAS ABUH30LUAS Motor: MFH-X80VA2F	OL	25-30k	90-100k	OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ASUH24LMAS ASUH36LPAS Motor:MFD – U80XB3F	OL	45k	110k	OL	ABUH36LUAS Motor: MFH-XA1VA2F	OL	25-30k	90-100k	OL
Model	Red-Black	White-Black	Yellow-Black	Blue-Black	Model	Red-Black	White-Black	Yellow-Black	Blue-Black
ADUH07LUAS1 ADUH09LUAS1 Motor:MFG-X80VB2	OL	36k	90k	OL	ADUH18LUAS1 ADUH24LUAS1 Motor: MFG-X80VC2F	OL	30-40k	90-100k	OL