

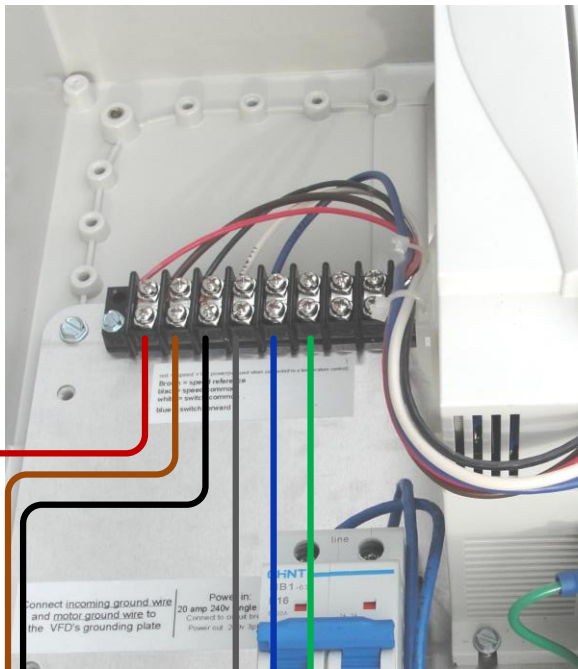
AmeriWind

E series

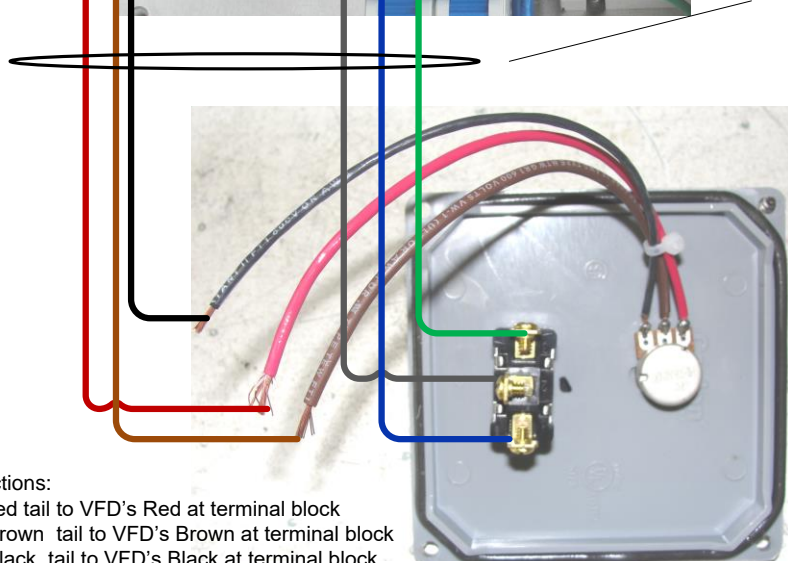
Owner's Manual



2021



100 ft wire pre connected to the VSDM1 is included.



The control wires can be daisy chained from fan to fan if individual control is not desired.

Connections:

Pot's red tail to VFD's Red at terminal block
 Pot's brown tail to VFD's Brown at terminal block
 Pot's black tail to VFD's Black at terminal block

Switch's top tab to VFD's Green at terminal block
 Switch's center tab to VFD's White at terminal block
 Switch's bottom tab to VFD's Blue at terminal block

Motor to VFD connection

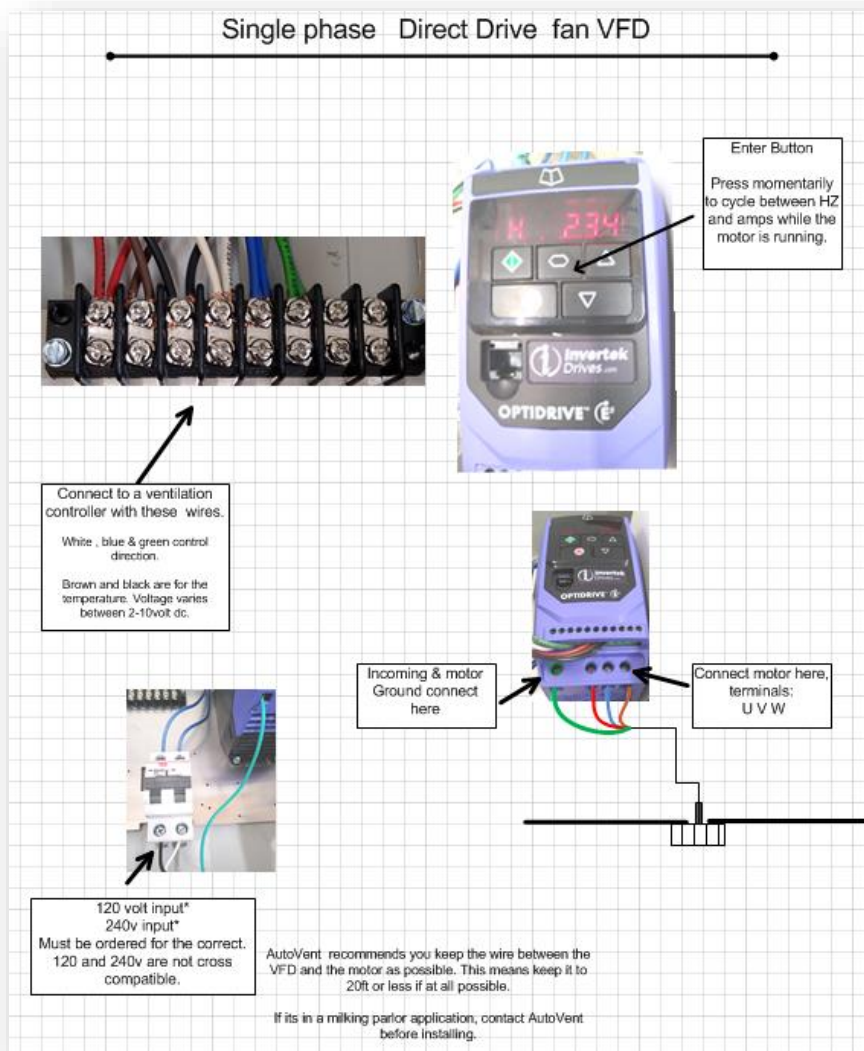
Green/yellow is the ground and connects to the ground screw

Red is L1 and connects to U

Blue is L2 and connects to V

Brown is L3 and connects to W

Make sure wire insulation is properly stripped and no insulation is pinched under the screw terminals.



Tuning the motor

Tuning the motor is required. Tuning is done after the fan is fully installed and ready to use.

Tuning the motor:

Power the VFD. Set the Forward/Reverse to off.

Scroll to P-52 and set it to a value of 1

The VFD will begin to identify the motor and you will hear it buzz. It should only take about 5 seconds.

Make sure blades are perfectly still and don't touch them while the VFD identifies the motor for useable results.

If you don't tune the motor, the fan might not run.

If you tune the motor with an accidental loose wire or something rotates the fan, the identification process will be corrupted. Redo the tuning procedure for any suspected problems.

Navigating the menu

Long press the enter button.

Then use the arrows to scroll to the desired parameter.

Long press again and use arrows to adjust the setpoint.

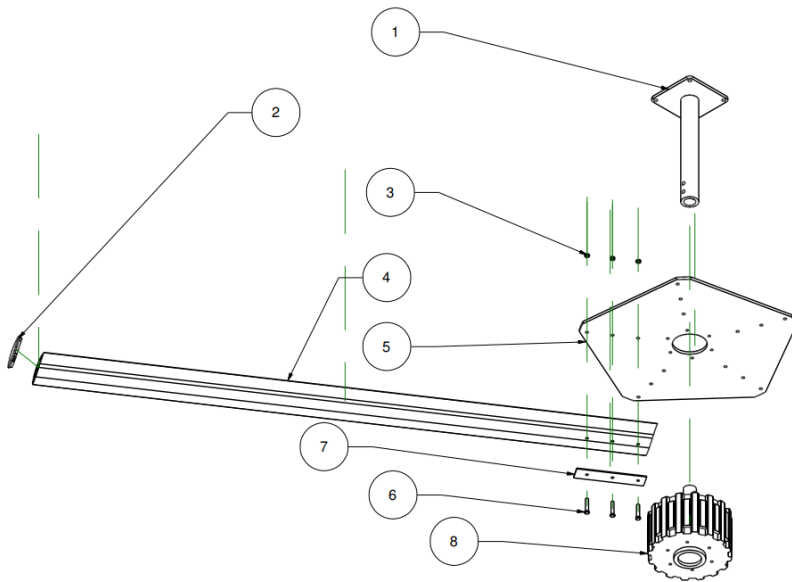
Long press again to save and exit.



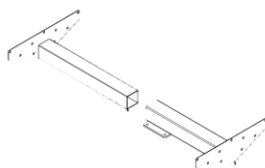
Fault codes

no-FLt	00	No Fault	Not required.
0l-b	01	Brake channel over current	Check external brake resistor condition and connection wiring.
0L-br	02	Brake resistor overload	The drive has tripped to prevent damage to the brake resistor.
0-i	03	Output Over Current	Instantaneous Over current on the drive output. Excess load or shock load on the motor. NOTE Following a trip, the drive cannot be immediately reset. A delay time is inbuilt, which allows the power components of the drive time to recover to avoid damage.
l-t-erP	04	Motor Thermal Overload (I2t)	The drive has tripped after delivering >100% of value in P-08 for a period of time to prevent damage to the motor.
0-uolt	06	Over voltage on DC bus	Check the supply voltage is within the allowed tolerance for the drive. If the fault occurs on deceleration or stopping, increase the deceleration time in P-04 or install a suitable brake resistor and activate the dynamic braking function with P-34.
U-uolt	07	Under voltage on DC bus	The incoming supply voltage is too low. This trip occurs routinely when power is removed from the drive. If it occurs during running, check the incoming power supply voltage and all components in the power feed line to the drive.
0-t	08	Heatsink over temperature	The drive is too hot. Check the ambient temperature around the drive is within the drive specification. Ensure sufficient cooling air is free to circulate around the drive.
U-t	09	Under temperature	The drive temperature is below the minimum limit and must be increased to operate the drive.
P-dEF	10	Factory Default parameters loaded	
E-tr iP	11	External trip	E-trip requested on digital input 3. Normally closed contact has opened for some reason. If motor thermistor is connected check if the motor is too hot.
SC-0bS	12	Optibus comms loss	Check communication link between drive and external devices. Make sure each drive in the network has its unique address.
FLt-dc	13	DC bus ripple too high	Check incoming supply phases are all present and balanced.
P-LOSS	14	Input phase loss trip	Check incoming power supply phases are present and balanced.
h 0-i	15	Output Over Current	Check for short circuits on the motor and connection cable. NOTE Following a trip, the drive cannot be immediately reset. A delay time is inbuilt, which allows the power components of the drive time to recover to avoid damage.
th-FLt	16	Faulty thermistor on heatsink	
dRAr-F	17	Internal memory fault (IO)	Press the stop key. If the fault persists, consult you supplier.
4-20 F	18	4-20mA Signal Lost	Check the analog input connection(s).
dRAr-E	19	Internal memory fault (DSP)	Press the stop key. If the fault persists, consult you supplier.
F-Ptc	21	Motor PTC thermistor trip	Connected motor thermistor over temperature, check wiring connections and motor.
FRn-F	22	Cooling Fan Fault (IP66 only)	Check / replace the cooling fan.
0-hERt	23	Drive internal temperature too high	Drive ambient temperature too high, check adequate cooling air is provided.
0Ut-F	26	Output Fault	Indicates a fault on the output of the drive, such as one phase missing, motor phase currents not balanced. Check the motor and connections.
ARF-02	41	Autotune Fault	The motor parameters measured through the autotune are not correct. Check the motor cable and connections for continuity. Check all three phases of the motor are present and balanced.
SC-F01	50	Modbus comms loss fault	Check the incoming Modbus RTU connection cable. Check that at least one register is being polled cyclically within the timeout limit set in P-36 Index 3.
SC-F02	51	CAN comms loss trip	Check the incoming CAN connection cable. Check that cyclic communications take place within the timeout limit set in P-36 Index 3.

Parts list



Item Number	Quantity	Part Number	Part Name
1	1	AW_E001	Mounting bracket
2	5	AW_T020	BladeCap
3	15	AW_T005	three eighths inch nut
4	5	AW_NJ7133-nnn	blade
5	1	AW_E002	hub
6	15	AW_T012	three eighths inch bolt
7	5	AW_T001	blade washer
8	1	AW_Y255	motor



Maintenance

Year maintenance is required on the E series fan for continued excellent performance and safety. Access to the fan is required for maintenance.

Once a year:

Step 1 – Lockout and tag out electric. Do not leave the fan energized while working on it

Step 2 – Wipe fan blades with warm soapy water and a rag. Clean all dust buildup from the blades as it hinders performance. Clean all dirt forming on the motor as dust buildup makes the motor run warmer and can cause overheating.

Step 3 - Attempt to physically shake fan – fan should not wobble. Check fan body and mount for any weakness related to loose fasteners.

Fan with guy wires. Inspect guy wire. Make sure cables are tight. Retention as necessary if cables are loose.

Step 4 – Check blade bolts for loose fasteners. Bolts need to be tensioned to 38 ft. lb. Retighten as necessary.

Step 5 – Check all mounting bolts for any signs of loosening or any signs of structural fatigue on the building to which the fan is mounted. Retighten as necessary

Step 6 - Check for any loose or frayed wires. Tighten or replace as needed.

Warranty

The E series fan has a 2-year mfg. defect warranty.