



Inverters (Closed)

Inverter Controllers

Variable Frequency Drives



Variable Frequency Drives (VFD) can offer potential energy savings in a system where the load varies with time. The operating speed of the motor connected to the VFD is varied by changing the frequency of the motor supply voltage. This allows continuous speed control.

Variable Frequency Drives are used:

- to improve the efficiency of motors by matching speed to changing load requirements or
- to allow accurate and continuous control over a wide range of speeds

- Enclosed drives EVFD.
- IP54 / 55 Enclosure.
- Energy Saving.
- Built – In EMC Filter.
- Vario Switch Disconnecter.
- On / Off Selector Switch.
- Speed Variation Potentiometer.
- Up to 16 preset speeds.
- Auto Tuning.
- Suitable for operating temperatures up to 40°C.
- PI regulator for closed loop control.
- Skip Frequency capability.
- Motor and Drive Protection.
- Integrated Modbus and CANOPEN protocols.
- Display Monitoring.
- Fault Diagnostics.

Features & Benefits

Accurate and smooth speed control not dependant on load characteristics which are typical of voltage controllers.

Motor Soft Starting to reduce the effects of motor starting torque and currents.

Integrated EMC Filter simplifies installation and provides an economical way of meeting applicable standards.

Adaptation of Voltage / Frequency ratio to optimise performance for fans.

Energy Saving via relationship between motor power and speed.

As power varies with the cube of speed, significant savings can be made with a small reduction in fan speed.

Product has been certified as meeting the requirements of the Enhanced Capital Allowance Scheme.

Fan Compatibility Table

Product Code*	Range kW	149-EVFD/_ -1 1ph -3ph	149-EVFD/ 3ph -3ph	149-CVFD/_ -1 1ph -3ph	149-CVFD/ 3ph -3ph
SCP	ALL		•		•
SCD	ALL		•		•
SLC	<=2.2	•	•	•	•
SLC	>2.2		•		•
SMB	<=2.2	•	•	•	•
SMB	>2.2		•		•
SMC	<=2.2	•	•	•	•
SMC	>2.2		•		•
SSBD	ALL		•		•
SSF	ALL		•		•
SSMF	ALL		•		•
SSBR	ALL		•		•
SGE	ALL		•		•
SCHT	<=2.2	•	•	•	•
SCHT	>2.2		•		•
SSFV	ALL		•		•

*Only Three phase fan ranges are suitable for Inverter control.

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SINGLE Phase supply voltage with Integrated Filter 200V–240V 50/60Hz

Product Code	Motor Power(1) kW	VFD Nominal Current(2) A	Max. Prospective Line ISC(3) kA	Weight kg	IP Rating
149-EVFD/18-1	0.18	1.5	1	6.3	IP55
149-EVFD/37-1	0.37	3.3	1	6.3	IP55
149-EVFD/75-1	0.75	4.8	1	6.3	IP55
149-EVFD/150-1	1.5	8	1	8.8	IP55
149-EVFD/220-1	2.2	11	1	10.7	IP55

- (1) Power rating for maximum switching frequency of 4kHz.
- (2) Motor current must not exceed VFD nominal current.
- (3) If Line Isc exceeds value in table, add line chokes. Contact Elta Fans for further information.

THREE Phase supply voltage with Integrated Filter 380V–500V 50/60Hz

Product Code	Motor Power(1) kW	VFD Nominal Current(2) A	Max. Prospective Line ISC kA	Weight kg	IP Rating
149-EVFD/75	0.75	2.3	5	8.8	IP55
149-EVFD/150	1.5	4.1	5	8.8	IP55
149-EVFD/220	2.2	5.5	5	8.8	IP55
149-EVFD/300	3	7.1	5	10.7	IP55
149-EVFD/400	4	9.5	5	10.7	IP55
149-EVFD/550	5.5	11	22	16	IP54
149-EVFD/750	7.5	14	22	22	IP54
149-EVFD/1100	11	21	22	22	IP54
149-EVFD/1500	15	27	22	28	IP54

- (1) Power rating for maximum switching frequency of 4kHz up to 149-EFD/400, 8kHz above.
- (2) Motor current must not exceed VFD nominal current.



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