GE Consumer & Industrial
Electrical Distribution

Built-in features
Built-in simplicity
Built for fans & pumps

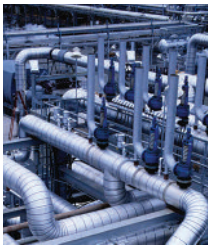
AF-600 FP™ Fan & Pump Drives

imagination at work

AF-600 FP™ Fan & Pump Drives

Built for variable torque



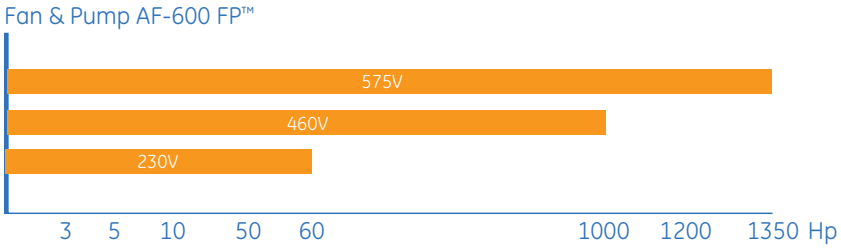




Specifically designed for fan and pump applications, the AF-600 FP drive has been optimized to make it run your applications right out of the box.

- Fans: HVAC, cooling towers, VAV, supply and return, exhaust, fume hood, make-up air, induced and forced draft, furnace temperature control
- Pumps: chilled water, pressure boosting, cooling tower, wastewater, chiller, irrigation, hydro-storage

Its compact size makes it easy to mount inside a control panel or to be used standalone, and its dedicated features include sophisticated controls that lower your overall costs. That includes an Energy Savings Optimizer that can boost energy savings by 5-15% at partial loads.

- Available up to 60Hp @ 208/230V, up to 1000Hp @ 460V and up to 1350Hp @ 575V
- Energy monitoring and analysis reports provide payback analysis for your drives
- Compliance with major international standards CE, UL, cUL, C-Tick



Built-in features lower your total cost

- Self protecting features
- 110% current overload for 1 minute
- Flying start (catch a spinning motor)
- Precise stop function
- Electronic thermal overload
- Easy to use PC software
- Energy monitoring feature
- Flow compensation
- Pump cascade controller
- Sleep mode
- Automated resonance monitoring
- Fan belt monitoring
- Stairwell pressurization
- Fire override mode
- Dry pump protection
- 4 auto-tune PID controllers
- Resonance monitoring
- Belt monitoring
- Real time clock
- Plenum rated

Stand-alone drive types

For drives rated up to and including 125HP

- IP20/chassis
- IP21/NEMA 1 Field Installed Kit

For drives rated 150HP or more

- IP00/chassis
- IP21/NEMA 1

For all drives

- IP54 /55/NEMA 12

AF-600 FP™ Fan & Pump Drives

Standard features

Control card

Terminal blocks	Pluggable, spring-loaded
Serial ports	RS485 and USB ports
Control inputs	4/6 digital, 2 analog, 2 pulse
Control outputs	2 relay, 1 analog, 2 pulse

Fieldbus
Built-in Modbus RTU, Metasys N2, Apogee FLN P1

Logic controller
Built-in sequencer that can eliminate the need for PLCs or timers
Easy to learn, program and debug

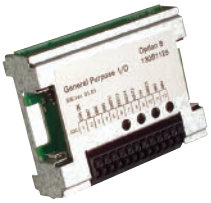
DCT-10 software
Familiar, intuitive interface
Option programming
On- and off-line utility
Real-time data collection
Process management interaction
USB, RS485 or Fieldbus communication
On-board help for each parameter
Logging of alarms and warnings
Easy fault history documentation

RFI filter
Reduces interference
A2 standard, A1 and B1 optional
Facilitates meeting CE EMC directives

DC link reactor
Low harmonic emission: THID < 48%
No voltage drop, full output voltage
Fulfils EN 61000-3-2/3-12
Displacement power factor (cos f ~ 1)
True power factor 0.9

Optional features

Plug-and-play option modules deliver application versatility so you can maximize performance and energy savings.



Fieldbus
Profibus, DeviceNet, LonWorks, Ethernet IP, BACNet
Top or bottom cable entry

General purpose I/O
3 digital and 3 analog inputs
2 digital and 1 analog outputs

Relay
Adds 3 relay outputs
AC-1 Resistive load 240VAC, 2A
AC-15 Inductive load @ cos ? 0.4, 0.2 A
DC-1 Resistive load 240V AC 1A
DC-13 Inductive load @ cos ? 0.4, 0.1 A

Safe PLC interface
Maintains integrity of dual wire Safe PLC safety link
Isolates safety link circuit from other standard logic inputs
Eliminates interference with the Safe PLC safety link sense signal

24 Vdc supply

Powers control card and options
Allows serial communication, control, programming and diagnostics during power outages
Input voltage range: 24 V DC ± 15% (max. 37 V in 10 sec.)
Max. input current: 2.2 A
Input capacitance load: < 10 uF
Power-up delay: < 0.6 s

Line / load reactors

Filters switching frequency from drive output
Reduces motor's audible noise
Eliminates dV/dt and Vpeak motor insulation stresses
Allows use of non-VFD rated motors

Harmonics filter

Reduces AC line current distortion
Superior to 12 and 18 pulse solutions
Supplements built-in DC Link Reactor

Backplate

Completes heatsink cooling air channel
NEMA 1 (IP21) , NEMA 12 (IP55)

Conformal coating

Protects electronics from aggressive atmospheres
Tested to ANSI/ISA S71.04-1985, Classes G3 and GX

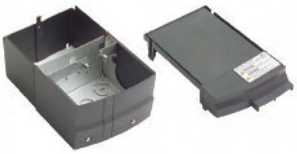
Accessories

Remote display kit

NEMA 4 (IP65) rating for remote mounting of keypad
Preassembled cable

NEMA 1 kits

Converts IP20 chassis drive to IP21/NEMA 1
Includes field-installable top dust cover, bottom wiring box and bonding plate
Fits all drives ≤125HP



AF-600 FP™ Fan & Pump Drives

Built-in simplicity speeds set-up

The removable keypad, common to all AF-6 Series drives, is your window into all programming and information elements.

The keypad INFO key provides full-text, context-sensitive information to make programming easier and can eliminate the need for printed manuals. In most cases, start-up can be completed in less than 5 minutes – saving you valuable time.

You can set up one drive and then copy settings to other drives using the hot pluggable feature, eliminating the need for duplicate programming.

The Quick Menu provides easy access to all the basic settings and the controller.

- Hot pluggable
- Illuminated LCD display
- Parameters & their values
- Unit indications
- Rotation direction indication
- Set-up indication
- Custom user displays
- Trended charts display speed, torque, current
- Full alarm messages & descriptions

Actual size

AF-600 FP™ Fan & Pump Drives

Ratings, dimensions and specifications

Voltage	HP Rating	Output Current (A)	Efficiency		Watt Loss (W)	GE Unit Size	Type	Dimensions (in)			Weight (lbs)
			kHz	%				Height	Width	Dept	
230Vac	1	6.6	5	96	63	12	IP20	14.7	3.5	8.7	10.8
	2	7.5	5	96	82	12	IP20	14.7	3.5	8.7	10.8
	3	10.6	5	96	116	12	IP20	14.7	3.5	8.7	10.8
	5	16.7	5	96	185	13	IP20	14.7	5.1	8.7	14.55
	7.5	24.2	4	96	269	23	IP20	15.71	6.5	9.13	26.5
	10	30.8	4	96	310	23	IP20	15.71	6.5	9.13	26.5
	15	46.2	4	96	447	23	IP20	15.71	6.5	9.13	26.5
	20	59.4	4	96	602	24	IP20	20.47	9.06	9.41	51.8
	25	74.8	3	96	737	33	IP20	24.8	12.13	13.15	77.2
	30	88	3	97	845	33	IP20	24.8	12.13	13.15	77.2
	40	115	3	97	1140	33	IP20	24.8	12.13	13.15	77.2
	50	143	3	97	1353	34	IP20	31.5	14.57	13.15	110.2
	60	170	3	97	1636	34	IP20	31.5	14.57	13.15	110.2
460Vac	1	2.7	5	96	58	12	IP20	14.7	3.5	8.7	10.8
	2	3.4	5	97	62	12	IP20	14.7	3.5	8.7	10.8
	3	4.8	5	97	88	12	IP20	14.7	3.5	8.7	10.8
	5	8.2	5	97	124	12	IP20	14.7	3.5	8.7	10.8
	7.5	11	5	97	187	13	IP20	14.7	5.1	8.7	14.55
	10	14.5	5	97	255	13	IP20	14.7	5.1	8.7	14.55
	15	21	4	98	278	23	IP20	15.71	6.5	9.13	26.5
	20	27	4	98	392	23	IP20	15.71	6.5	9.13	26.5
	25	34	4	98	465	23	IP20	15.71	6.5	9.13	26.5
	30	40	4	98	525	24	IP20	20.47	9.06	9.41	51.8
	40	52	4	98	698	24	IP20	20.47	9.06	9.41	51.8
	50	65	3	98	739	24	IP20	20.47	9.06	9.41	51.8
	60	80	3	98	843	33	IP20	24.8	12.13	13.15	77.2
	75	106	3	98	1083	33	IP20	24.8	12.13	13.15	77.2
	100	130	3	98	1384	34	IP20	31.5	14.57	13.15	110.2
	125	160	3	99	1474	34	IP20	31.5	14.57	13.15	110.2
	150	190	3	98	3234	43	IP00	39.3	16.1	14.7	200.6
	200	240	3	98	3782	43	IP00	39.3	16.1	14.7	200.6
	250	302	3	98	4213	44	IP00	50.3	16.1	14.7	304.2
	300	361	3	98	5119	44	IP00	50.3	16.1	14.7	304.2
	350	443	3	98	5893	44	IP00	50.3	16.1	14.7	304.2
	450	540	3	98	7630	52	IP00	59	23	19.5	611
	500	590	2	98	7701	52	IP00	59	23	19.5	611
	550	678	2	98	8879	52	IP00	59	23	19.5	611
	600	730	2	98	9428	52	IP00	59	23	19.5	611
	650	780	Consult GE			61	IP21/NEMA 1	86.8	55.1	23.9	2214
	750	890				61	IP21/NEMA 1	86.8	55.1	23.9	2214
	900	1050				62	IP21/NEMA 1	86.8	71	23.9	2748
	1000	1160				62	IP21/NEMA 1	86.8	71	23.9	2748

For 575Vac data, consult www.geelectrical.com/drives

GE Consumer & Industrial
41 Woodford Avenue
Plainville, CT 06062

www.geelectrical.com/drives

imagination at work