



New

# AF-6 Series Drives

Built-in features  
Built-in simplicity



GE imagination at work

## 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<sup>(1)</sup> 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<sup>(1)</sup>
- Full alarm messages & descriptions<sup>(1)</sup>

(1) Excluding AF-60 LP

## Built-in features lower your total cost

So much is already built in to AF-6 Series drives, you'll need fewer add-ons.

Discover how fast installation can be and realize a lower total cost.

- Built-in process PID controller optimizes operation
- Built-in communication networks for Modbus RTU, Metasys N2 and Apogee FLN P1 for the AF-600 FP drive
- Built-in logic controller eliminates the need for and cost of many additional controls
- Built-in fan & pump macros for the AF-600 FP drive
- Built-in DC link reactors ensure very low harmonic disturbance of the power supply (excluding AF-60 LP)
- Built-in brake chopper option eliminates separately mounted dynamic brake unit
- Built-in Class RFI eliminates the cost of additional components
- Automatic energy savings delivers better system efficiency
- Auto-tuning optimizes motor performance and reduces set-up time



Actual size



## AF-60 LP™ Micro Drive

# Built for ... small motor control

The AF-60 LP is built right for all those variable frequency applications requiring macro performance from a micro drive.

### Ready to go, right from the start

- Self protecting features
- 150% current overload up to 1 minute
- Flying start (catch a spinning motor)
- Precise stop function
- Electronic thermal overload
- Easy to use PC software
- Potentiometer on each keypad

### Built-in durability

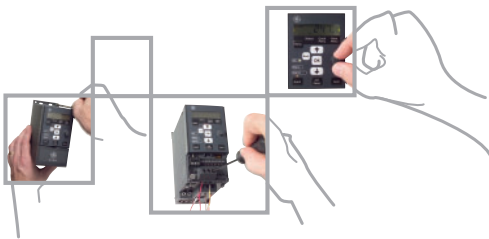
- Robust housing (IP20) protects the drive and allows side-by-side mounting with no de-rating
- Conformal coated circuit boards and high quality capacitors maximize uptime
- Intelligent heat management leads to long life
- RoHS compliance makes for environmental responsibility
- Standards: CE, UL, cUL, C-Tick

### Utter simplicity in installation and set-up

Right out of the box – which features the wiring diagram and template right on the lid, and which holds the Quick Guide – the AF-60 LP makes installation and set-up a snap. An optional DIN rail mounting kit is available up to and including 2.2kW drives.



Open Chassis/IP20 drive.



### AF-60 LP ratings

kW	230V 1Ph	230V 3Ph	400/460V 3Ph
0.18			
0.25			
0.37			
0.75			
1.5			
2.2			
3.7			
5.5			
7.5			
11			
15			
18.5			
22			



## AF-600 FP™ Fan & Pump Drive

# Built for ... HVAC and pump motor control

The AF-600 FP drive has been optimized for the range of variable torque applications, including fans, compressors and pumps. Its size makes it easy to mount in a control panel, and its dedicated features include sophisticated controls that make it a perfect match for HVAC solutions.

### All the features HVAC needs

- Built-in communication networks for ModBus RTU, Metasys N2 and Apogee FLN P1
- Field Installed Network Options: BACnet, LonWorks, Profibus DP, Profinet, Modbus TCP/IP, Ethernet/IP and DeviceNet
- 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
- Standards: CE, UL, cUL, C-Tick

### Stand-alone drive types

#### For drives rated up to and including 90kW

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

#### For drives rated 110kW or more

- IP00/chassis
- IP21/NEMA 1

#### For all drives

- IP54 /55/NEMA 12



NEMA 1/IP21 shown with optional field-installed kit

### AF-600 FP ratings

kW	230V 3Ph	400/460V 3Ph	690V 3Ph
0.75			
1.5			
2.2	IP20,		
4			
5.5	IP21/ NEMA 1 kits	IP20,	
7.5		IP21/ NEMA 1 kits	
11			IP21/ NEMA 1
15			
18.5	IP55/ NEMA 12		
22		IP55/ NEMA 12	IP54/ NEMA 12
30			
37			
45			
55			
75			
90			
110			
132		IP00,	IP00,
160			
200		IP21/ NEMA 1	IP21/ NEMA 1
250			
315		IP54/ NEMA 12	IP54/ NEMA 12
355			
400			
450			
500			
560		IP21/ NEMA 1	
630			
710			IP21/ NEMA 1
800		IP54/ NEMA 12	IP54/ NEMA 12
1000			
1200			

AF-650 GP™ General Purpose Drive

# Built for ... constant torque

The AF-650 GP drive is designed for control of mixers and material handling applications. It also provides vector modes (advanced, sensorless and closed loop) for those demanding torque applications. And the rock-solid aluminum base delivers the mechanical stability needed to maintain reliability in harsh environments.

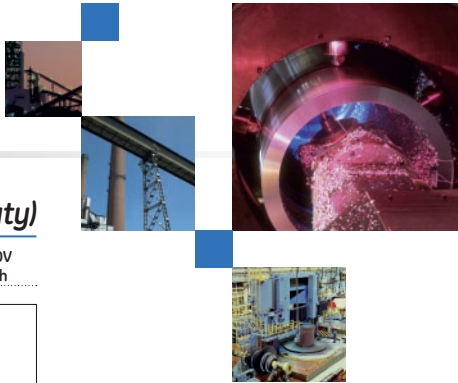


NEMA 12/IP55 shown

Drive types

**AF-650 GP ratings (Heavy Duty)**

kW	230V 3Ph	400/460V 3Ph	575V 3Ph	690V 3Ph
0.25	IP20,			
0.37				
0.75				
1.5	IP21/ NEMA 1 kits	IP20,	IP20,	
2.2		IP21/ NEMA 1 kits	IP21/ NEMA 1 kits	
3.7				
5.5	IP55/ NEMA 12	IP55/ NEMA 12	IP55/ NEMA 12	
7.5		IP66/ NEMA 4	IP66/ NEMA 4	IP21/ NEMA 1
11				IP55/ NEMA 12
15				IP66/ NEMA 4
18.5	IP66/ NEMA 4			
22		IP00,		IP00,
30		IP21/ NEMA 1		IP21/ NEMA 1
37		IP54/ NEMA 12		IP54/ NEMA 12
45				
55				
75				
90				
110				
132				
160				
200				
250				
315				
355				
400				
450				
500		IP21/ NEMA 1		
560				
630				
710		IP54/ NEMA 12		IP21/ NEMA 1 IP54/ NEMA 12
800				
900				
1000				



Fully functional, fully ready

- Self protecting features
- Field installed network options: Profibus DP, Profinet, Modbus TCP/IP, Ethernet/IP and DeviceNet
- 150% current overload up to 1 minute
- Flying start (catch a spinning motor)
- Precise stop function
- Electronic thermal overload
- Easy to use PC software
- Energy monitoring feature
- Modbus RTU
- Speed and process PID controls
- Advanced brake control
- Encoder feedback
- Standards: CE, UL, cUL, C-Tick

Stand-alone drive types

**For drives rated up to and including 75kW**

- IP20/chassis
- IP21/NEMA 1 Field Installed Kit
- IP66/NEMA 4

**For drives rated 90kW or more**

- IP00/chassis
- IP21/NEMA 1

**For all drives**

- IP54 /55/NEMA 12

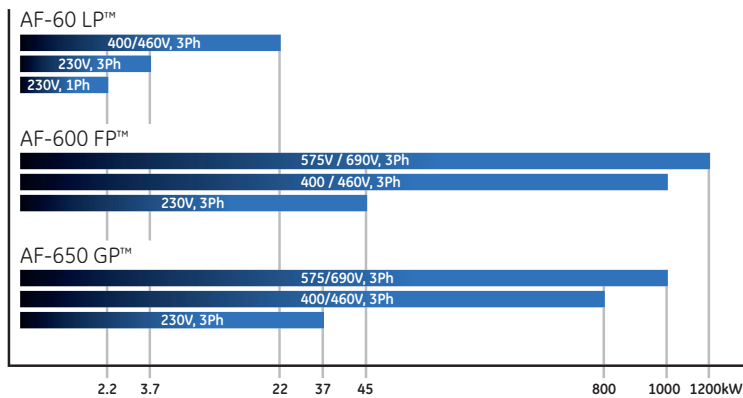


# Everything you need is built in

AF-6 Series drives range from 0.25 to 1200kW, each in a compact package, each with a host of built-in features that heighten performance, reduce energy consumption, simplify installation and eliminate the need for many costly add-ons. With the AF-6 Series, you get a drive already in tune with your application, in the most cost-efficient and space-efficient manner possible.

## Introducing the AF-6 Series:

- AF-60 LP™ Micro Drive – up to 22kW
- AF-600 FP™ Fan & Pump Drive – up to 1200kW
- AF-650 GP™ General Purpose Drive – up to 1000kW in Heavy Duty



Your need	The AF-6 answer
High quality, reliable products that meet local and global standards.	A full range of GE drives up to 1200kW that deliver built-in functionality, a compact size, long life and all relevant global standards.
Quick, easy installation to make you more efficient.	The Quick Menu allows you to set up a drive in less than 5 minutes. Full documentation is shipped with every drive.
Easy access to product information and knowledgeable technical support.	Innovative electronic tools provide easy access to accurate technical data. Our technical support teams answer your questions.



The use of GE's AF-6 Series drives will significantly **reduce energy consumption.**

For example, the installation of ten AF-600 FP Fan & Pump drives will result in:

- **78% reduction** in kilowatt hours
- **€ 21765** in annual energy savings
- **9 month** simple project payback

The same application will avoid **17 metric tons per year** in CO<sub>2</sub> emissions. That is the equivalent of planting **500 m<sup>2</sup>** of new trees.

Data based on each drive rated at 10HP (7.5kW) applied to an HVAC system operating for 12 hours per day at 60% speed, versus applying mechanical devices to a system running at 100% speed, at a commercial electricity price of euro 0.11 per kilowatt hour.

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