

You wouldn't drive your car with the gas pedal floored, using the brake to control your speed, however many pump users use the exact same approach to control their pumps. The solution? Variable Frequency Control of AC induction motors provides an economical and operationally effective solution for speed control and reduced power consumption. VFDs can be made responsive to signals from many sources such as flow sensors, pressure sensors, programmable controllers, etc. AC motor controls will enhance your process efficiency and profitability.



D700 Series
Low Cost Sub-Micro VFD

- Digital setting dial with integrated display making configuration fast and easy
- Control remotely or with built-in digital control
- Low cost and Mitsubishi Electric quality ensure solid solutions
- Magnetic Flux Vector Control with auto-tuning
- Safety stop function



E700 Series
'Big Drive' Vector Control Capability in a micro drive - delivering outstanding performance for a wide range of demanding loads

- Advanced Magnetic Flux Vector Control gives 120:1 speed range
- All capacities have built-in brake chopper
- USB communications for fast commissioning
- Standard RS 485 serial communications supporting Modbus RTU
- Supports Remote I/O function via network
- 200 % Overload for 3 seconds



E560 Series
The cost-effective variable speed control solution for general purpose applications

- Magnetic Flux Vector Control
- Auto-tuning
- Selectable cooling fan operation mode
- Adjustable carrier frequency (0.7kHz to 14.5kHz)
- Compatible with FR-PU04 user interface
- UL & cUL listed / CE marked



F700 Series
Built to optimize 3-phase motor control, saving energy for virtually all general purpose applications.

- UL Type 1, plenum rated, enclosure designs (NEMA 1)
- Built-in EMC filter
- FR-DU07 programming dial and FR-Configurator programming software
- Bi-directional coasting motor restart
- RS-485 communications as standard (Modbus RTU or Mitsubishi Electric)
- Upgrade of energy optimization control
- Control terminals can be used over a network as remote I/O
- FR-PU07BB-L keypad - programs the drive without powering-up
- UL listed for single phase input



A700 Series
Advanced performance makes it possible to support a wide range of variable speed applications from conveyance and chemical machines to line control applications such as winding and printing machines. Improved flexibility allows users to tailor their VFD to meet their application requirements.

- Real Sensorless Vector (RSV) Control achieves 200% torque at speeds as low as 0.3Hz
- Built-in PLC function allows users to create customized applications
- Positioning Control as standard allows simple moves from position to position
- Sensorless Torque Control can be utilized for wind/unwind applications
- Two RS-485 serial ports and one USB port make connectivity flexible
- FR-PU07BB-L keypad - program the drive without main power
- UL listed for single phase input

Model Series		D700				E560	E700				F700		A700		
Voltage Range (VAC)		115 1Ø	240 1Ø	240	480	600	115 1Ø	240 1Ø	240	480	240	480	240	480	600
HP Range	Constant Torque	1/8-1	1/8-3	1/8-10	1/2-10	1-10	1/8-1	1/8-3	1/8-20	1/2-20	1-200	1-1000	1/2-125	1/2-800	1-650
	Variable Torque												1-200	1-1000	2-850
Control Algorithm	Open-Loop Flux Vector Speed	Yes				Yes	Yes				No		Yes		
	Open-Loop Torque	No				No	No				No		Yes		
	Closed-Loop Speed	No				No	No				No		Yes		
	Closed-Loop Torque	No				No	No				No		Yes		
	Closed-Loop Position	No				No	No				No		Yes		
Inputs	Digital Inputs	5 (2 additional for Safety)				7	7 (expandable)				12 (expandable)		12 (expandable)		
	0-5 / 10VDC	Yes				Yes	Yes				No		No		
	0-±5 / ±10VDC	No				No	No				Yes		Yes		
	4-20mA	No				Yes	No				No		No		
	4-20mA or 0-5/10VDC	Yes				No	Yes				Yes (2 ports)		Yes (2 ports)		
	Pulse (Speed)	No				No	No				No		Yes		
Outputs	Digital Outputs	1				2	2 (expandable)				5 (expandable)		5 (expandable)		
	Relay Outputs	1				1	1 (expandable)				2 (expandable)		2 (expandable)		
	0-10VDC	Yes				Yes	Yes				Yes		Yes (expandable)		
	0-20mA	No				No	No				Yes		(optional)		
	Pulse	No				No	No				No		Yes		
Communications	Modbus RTU	Standard				No	Standard				Standard		Standard		
	CC-Link	No				Option	Option				Option		Option		
	DeviceNet	No				Option	Option				Option		Option		
	Profibus-DP	No				Option	Option				Option		Option		
	LonWorks	No				Option	Option				Option		Option		
	SSCNETIII	No				No	No				No		Option		
	ControlNET	No				No	No				No		Option		
	Metasys N2	Option				Option	Option				Option		Option		
	Siemens FLN	Option				Option	Option				Option		Option		
	BACnet/MSTP	Option				Option	Option				Option		Option		
	EtherNet/IP	Option				Option	Option				Option		Option (2 types)		
	Modbus TCP/IP	Option				Option	Option				Option		Option		
	BACnet/IP	No				No	Option				Option		Option		
Brake Transistor	Yes (1/2HP and above)				Yes	Yes (1/2HP and above)				No		Up to 30HP			
Brake Resistor	Option				Option	Option				No		Up to 10HP	Up to 5HP		
EMC Filter	Option				No	Option				Standard		Standard	No		
DC Reactor	Option				No	Option				Option (standard 100HP and above)					
Safety Stop Function	Standard				No	Option				No		No			
Communications Ports	1 (RS-485)				1 (RS485)	2 (RS-485 & USB)				2 (RS-485)		3 (2x RS-485 & USB)			
Plug-in Option Ports	0				1	1				1		3			
Operator Interface	Standard				Option	Standard				Standard		Standard			
Alpha/Numeric Keypad Option	FR-PU07				FR-PU04	FR-PU07				FR-PU07 FR-PU07-01		FR-PU07			
Alarm History	Last 8				Last 8	Last 8				Last 8		Last 8			

Variable Frequency Drives Family

Standard Features:

- RS-485 serial communications (Mitsubishi VFD protocol)
- PID control
- Adjustable carrier frequency (Low Noise) up to 14.5kHz
- Soft PWM
- Packaged solutions available
- Setup Software available
- User selectable Sink (default) / Source I/O

