

VARIOspeed®

Variable Frequency Drive for Pressure Control Applications

Part Number	Motor Max Amps ⁽¹⁾	Motor HP ⁽²⁾ (approx)	Enclosure Rating
208-240V, Three Phase Incoming Power			
V23-16.7	16.7	5	NEMA 1 (indoor)
V23-25.0	25.0	7.5	NEMA 1 (indoor)
V23-34.0	34.0	10	NEMA 1 (indoor)
V23-49.0	49.0	15	NEMA 1 (indoor)
V23-63.0	63.0	20	NEMA 1 (indoor)
V23-77.0	77.0	25	NEMA 1 (indoor)
V23-93.0	93.0	30	NEMA 1 (indoor)
V23-125	125.0	40	NEMA 1 (indoor)
V23-154	154.0	50	NEMA 1 (indoor)
V23-187	187.0	60	NEMA 1 (indoor)
V23-233	233.0	75	NEMA 1 (indoor)
208-240V, Single Phase Incoming Power			
V21-20.4	20.4	5	NEMA 1 (indoor)
V21-29.4	29.4	7.5	NEMA 1 (indoor)
V21-37.8	37.8	10	NEMA 1 (indoor)
V21-46.3	46.3	15	NEMA 1 (indoor)
V21-55.8	55.8	20	NEMA 1 (indoor)
V21-75.0	75.0	25	NEMA 1 (indoor)
V21-92.4	92.4	30	NEMA 1 (indoor)
V21-112	112.2	40	NEMA 1 (indoor)
V21-139	139.8	50	NEMA 1 (indoor)
380-480V, Three Phase Incoming Power			
V43-8.3	8.3	5	NEMA 1 (indoor)
V43-12.6	12.6	7.5	NEMA 1 (indoor)
V43-17.0	17.0	10	NEMA 1 (indoor)
V43-25.0	25.0	15/20	NEMA 1 (indoor)
V43-31.0	31.0	25	NEMA 1 (indoor)
V43-38.0	38.0	30	NEMA 1 (indoor)
V43-47.0	47.0	40	NEMA 1 (indoor)
V43-62.0	62.0	50	NEMA 1 (indoor)
V43-77.0	77.0	60	NEMA 1 (indoor)
V43-93.0	93.0	75	NEMA 1 (indoor)
V43-116	116.0	100	NEMA 1 (indoor)
380-480V, Single Phase Incoming Power			
V41-10.2	10.2	5	NEMA 1 (indoor)
V41-15.0	15.0	7.5	NEMA 1 (indoor)
V41-18.6	18.6	10	NEMA 1 (indoor)
V41-22.8	22.8	15	NEMA 1 (indoor)
V41-29.2	29.2	20	NEMA 1 (indoor)
V41-37.2	37.2	25	NEMA 1 (indoor)
V41-46.2	46.2	30	NEMA 1 (indoor)
V41-55.8	55.8	40	NEMA 1 (indoor)
V41-69.6	69.6	50	NEMA 1 (indoor)

Larger horsepower and NEMA 3R enclosure (outdoor) available.
 (1) Check motor max amps for proper drive sizing, Drive Output Current rating must be greater than motor max amps.
 (2) Horsepower rating is based on standard NEMA B 4-pole motor (used for indication only, use motor max amps for sizing).
NOTE: The out put voltage of the VARIOspeed® VFD cannot exceed the incoming power. **Example:** 208V in, 208V out.



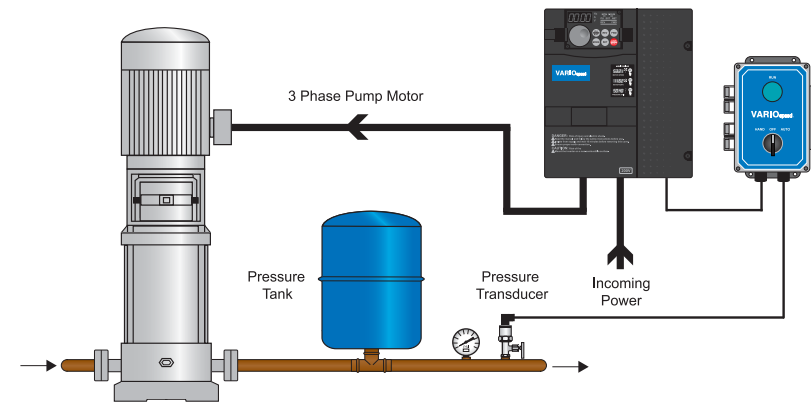
220 Ohio Street
 Ashland, Ohio 44805
1-800-363-5842
 Phone: 419-281-5767
 Fax: 419-289-2535
www.csicontrols.com



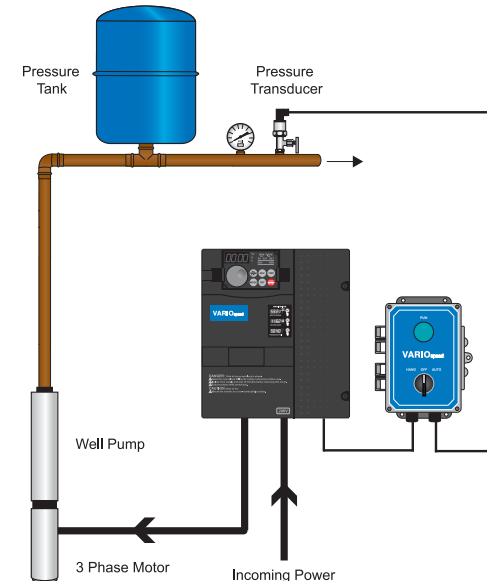
VARIOspeed® Variable Frequency Drive

Constant Pressure Control Applications:

- Booster Pump
- Deep Well Submersible Pump
- Irrigation Pump



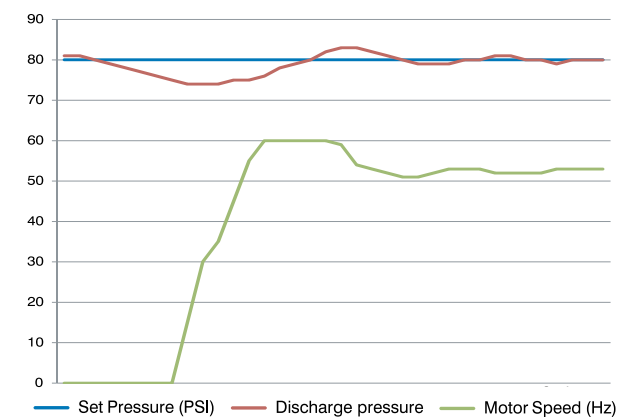
Pressure Booster Pump Application



Deep Well Submersible Pump Application

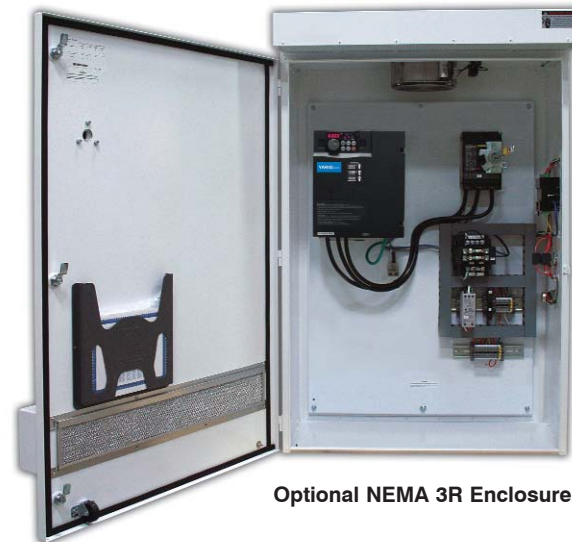
Operating Principal:

As flow and head conditions change in the pumping system, the VARIOspeed® VFD is able to automatically control the pump speed and maintain a constant discharge pressure. The desired set pressure is set on the VFD keypad. The pressure transducer measures the pump discharge pressure.



Customization / Options:

- NEMA 3R outdoor rated control panels
- Line and load reactors
- Duplex, triplex and 4-plex VFD systems with automatic alternation and lead/lag operation



Optional NEMA 3R Enclosure

VARIOspeed® Features

Power:

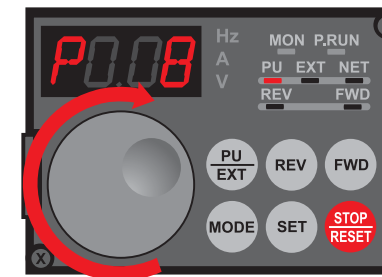
- Available HP range
 - (208 - 240V) 5HP - 150HP
 - (380 - 480V) 5HP - 250HP
- Models available for single phase or three phase supply voltage
- UL Listed for single phase and three phase supply voltage
- Energy optimization control

Control:

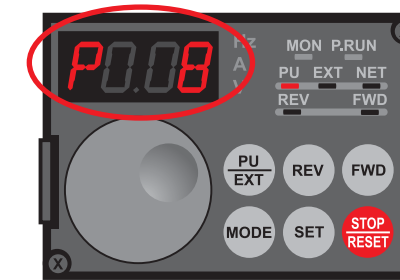
- P.I.D. control
- Adjustable electronic overload
- 0-200 PSI transducer (4-20mA signal)
- Auto Start on pressure drop (adjustable)
- Auto Stop on No-Flow (sleep mode)
- Pre-charge control (gradual pipe pressurization)
- High and low pressure alarms
- Automatic system restart
- 12 digital inputs (may be used for low water alarm)
- 3 analog inputs
- 2 relay outputs
- 2 analog outputs
- Modbus RTU communication (RS-485)

Operator Interface:

- Simple and user friendly display, keypad and Hand/Off/Auto switch.



Dial Change



Parameter Change



Hand/Off/Auto and Run Light



The VARIOspeed® Advantage:

- Parameters are pre-programmed in our factory to YOUR specific application
- True Hand/Off/Auto switch with run light
- 0-200 PSI pressure transducer - pre-wired (20 ft. cable)
- 100% factory tested
- Quick installation, simple startup

