

# Power Gate

BYPASS SYSTEMS

## THE DUAL PUMP SOLUTION



### Packaged for Your Application Needs

- For 2 pump 100% redundant systems
- Single VFD system with selectable lead/lag (primary/secondary) pump alternation
  - Manual transfer initiated by operator
  - Remote transfer initiated by external DDC
  - Automatic alternation, operator selectable time period
  - Fault by primary pump will automatically switch to secondary pump — alternation suspended until after pump fault is cleared
- Plain English display:
  - System status
  - Individual pump run time meters
  - Individual pump alarms
- Selectable three contactor bypass configuration with TEST mode
  - In case of VFD fault, pump is manually operated across the line
  - Optional automatic bypass — in case of VFD fault, pump is automatically operated across the line
- Circuit breaker disconnect as standard
- NEMA 1 Enclosed, available up to 150Hp in 460V/600V and 50Hp in 200V/240V
- UL/cUL 508C approved/ISO 9001 recognized

### Simple to Use

- Multi-function programmer and display unit
- Average set-up is less than 8 parameters
- Reduced field wiring and set-up

### Experience and Expertise

- 20 years of VFD drive manufacturing
- 25 years of design build experience
- Latest generation of IGBT's for improved performance
- Industry leading energy savings

**Delivering Power.  
Saving Energy.**



Mitsubishi Electric Automation, Inc.

The uninterrupted power in HVAC solutions

# PACKAGED DUAL PUMP SYSTEMS

## Features

- RS-485 and Modbus RTU as standard
- Metasys, Lonworks, BACnet, Siemens FLN (pending), Ethernet IP
- Design/build options available for your needs
- All field terminations brought out to terminal blocks
- Carrier frequency up to 14.5KHz
- 3 customizable critical skip frequency bands
- Soft-PWM control (low noise emissions)
- EMI/RFI filter built-in as standard
- Optimized excitation control – motor tuning
- Built-in PID control with pre-soak mode as standard
- Class 10 motor overload protection
- 115V control transformer, fused primary and secondary
- HELP functionality with troubleshooting hints
- Last 8 alarms stored
- All systems are tested under motor load
- As-built documentation packet
- 2 year warranty
- UL/cUL 508C recognized packaged systems

## TECHNICAL DATA

### Input Ratings:

- Voltage: 3-phase, 200–240V; 380–480V; 575–600V
- Voltage fluctuation: -15% to +10% at 50/60Hz
- Frequency: 50/60Hz; ± 5%

### Output Ratings:

- 0 volts to max voltage
- Frequency 0–400Hz

### Overload Rating:

- 110% for 60s (120% for 3s)

### Environment:

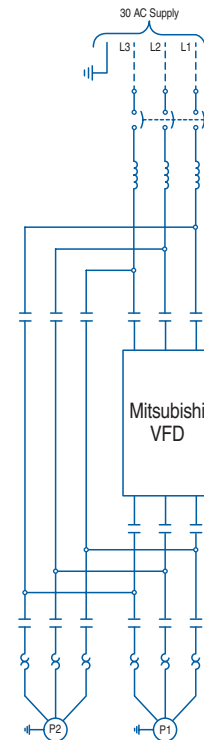
- 14°F to 104°F ambient (-10°C to +40°C)
- 95% relative humidity (non-condensing)

### Options:

- 3% or 5% input line reactor
- Output line reactor
- Automatic bypass (following VFD fault)
- Third party devices: well bulb sensors, transducers, pressure sensors, run hour timer

### Protection (2 Form C Relays):

- Over-current (3 modes)
- Overload (2 modes)
- Over-voltage (3 modes)
- Under-voltage
- Ground-fault
- VFD overheat
- Motor overheat (I2t)
- Motor stall
- Retry time-out
- Option alarm
- Microprocessor fault (2 modes)
- Output phase loss
- Power supply fault



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