The DPC-4F is a multi-function pump controller designed to operate two pumps. The unit can be configured to operate as a backup controller or a duplex controller. The controller operates using inputs from 1-4 float switches.

**MULTI-FUNCTION**

4 MODE selector switch and operation
- MODE 1: 1-float backup operation with pump run timer
- MODE 2: 2-float backup operation
- MODE 3: 3- or 4-float backup operation
- MODE 4: 3- or 4-float duplex operation

Pump alternator selector switch
Adjustable lag pump delay/pump run timer

**FEATURES**

- Green LED indicators for Power On and Pump Call-To-Run
- Red LED indicator for Alarm and Backup Mode
- Amber LED indicators for Float Status
- Float out of sequence detection (Mode 4 only)
- HIGH level relay directly operated by FLOAT 4, independent of microcontroller
- 12 VDC power to float switches
- Relay Outputs: Pump Call-To-Run (2), Low, High, Horn/Backup
- UL Listed
- 2-year limited warranty

**WARNINGS**

Users must read this manual and understand controller operation before changing any settings. Incorrect settings may result in damage to equipment. All floats shall be normally open floats for proper operation.
**MODE 1: Single Float Backup with Pump Timer**

**Basic Operation:**
Pump turns on when Float 4 closes. Pump turns off when Float 4 opens and pump run timer expires.
Backup Mode Activated by: Float 4 closed.
Backup Mode Reset: Trigger the Reset input while Float 4 is open.
Lag Pump Delay Timer: 10 seconds (not adjustable).
Timer Dial: Controls pump run time (0—600 seconds), timer begins when Float 4 opens. Set timer based on actual field conditions to prevent short cycling pump or running the pump dry.
The High relay will close when Float 4 is closed.

**MODE 2: Two Float Backup**

**Basic Operation:**
Pump turns on when Float 4 closes. Pump turns off when Float 1 opens.
Backup Mode Activated by: Float 4 closed or Float 1 open.
Backup Mode Reset: Trigger the Reset input while Float 4 is open and Float 1 is closed.
Timer Dial: Controls lag pump delay time (0—60 seconds).
The High relay will close when Float 4 is closed.
The Low relay will close when Float 1 is open.
MODE 3: Three or Four Float Backup

Basic Operation:
Pump turns on only in Backup Mode, when Float 4 closes. Pump turns off when Float 1 opens or backup mode is reset.
Backup Mode activated by: Float 4 closed or Float 1 open.
Backup Mode Reset: Trigger the Reset input while Float 4 is open and Float 1 is closed.
Timer Dial: Controls lag pump delay time (0—60 seconds).
The High relay will close when Float 4 is closed.
For 3-float operation, connect floats to Float 1, Float 2, and Float 4.
* Jumper Float 2 and 3 for lead pump and lag pump activation.
** Jumper Floats 3 and 4 for lead pump start, and lag pump/alarm activation.

MODE 4: Four Float Duplex Operation

Basic Operation:
Pump turns on when Float 2 closes. Lag pump turns on when Float 3 closes. Pumps turn off when Float 1 opens.
Timer Dial: Controls lag pump delay time (0—60 seconds).
The High relay will close when Float 4 is closed. The Horn relay will flash while Float 4 is closed unless it is silenced by triggering the Silence input.
For 3-float operation, connect floats to Float 1, Float 2, and Float 4.
* Jumper Float 2 and 3 for lead pump and lag pump activation.
** Jumper Floats 3 and 4 for lead pump start, and lag pump/alarm activation.
*** Alarm Test Feature - If the Test/Silence/Reset input is activated when there is no alarm condition present, the Horn Relay will flash, and the Low Relay will close.
**** Mode 4 provides for Float Out-Of-Sequence detection. If Float 1, 2, or 3 fails to activate in the correct sequence (example below), the low relay will activate ON. The Out-Of-Sequence fault will clear when the failed float returns to the correct position.
**Conductor Size and Terminal Torque Requirements:**

- Float terminals: 22-14 AWG, 7 in-lbs
- Top green terminals (pluggable): 22-14 AWG, 7 in-lbs

**Dimensions:**

- Enclosure: 5.81 x 3.5 x 1.98 inches (14.8 x 8.9 x 5.1 cm)
- Mounting holes: 5.43 x 2.50 inches (13.8 x 6.4 cm)
- Recommended mounting screws: Size 8
- Weight: 7.5 oz (213 g)

**SPECIFICATIONS**

**Electrical Ratings:**

- Input voltage: 100 ~ 250 VAC (50/60 Hz)
- Transient Protection: 10,000 V for 20 microseconds
- Float switch inputs: 12 VDC, 26 mA each
- Max float switch cable length: 328 feet (100 m)

**Relay Outputs:**

- Rating: 5 A max. @ 240 VAC
- Mechanical: 10,000,000 operations
- Full load: 100,000 operations

**Environmental Rating:**

- Internal panel mount only
- Operating temperature: -18°F ~ 140°F (-28°C ~ 60°C)
- Storage temperature: -40°F ~ 185°F (-40°C ~ 85°C)
- Relative humidity: 95% non-condensing

**Conductor Size and Terminal Torque Requirements:**

- Float terminals: 22-14 AWG, 7 in-lbs
- Top green terminals (pluggable): 22-14 AWG, 7 in-lbs

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**Mode Switch**

- **ALT:** Automatic alternation
  - 1-2: Pump 1 always lead
  - 2-1: Pump 2 always lead

- **Controller** flashes pump and alarm lights the number of times indicated on the Mode selector at power-up or if the mode is changed.