**Series QPC Quadraplex Pump Controller** is used where four pumps are required to alternate to provide equal run time on each. Alternating loads allow for equal wear on all pumps lengthening their operation life. The Series-QPC has five inputs allowing the four outputs to operate properly even if one of the inputs fails to open or close. Four LED indicators show the load that is energized by the SPST output contacts. The QPC is available in two sequence configurations: sequence-on-simultaneous-off (SOSO) and first-on-first-off (FOFO). In the SOSO sequence, an additional load is energized each time a higher level switch is activated, and all loads are de-energized simultaneously when the lowest level switch deactivates. In the FOFO sequence, the loads are energized in the same manner as the SOSO sequence, but loads are de-energized individually as each level switch deactivates. In either sequence, the lead load position is advanced to equalize run time on each pump. An inrush delay on both models reduces line sags by preventing multiple loads from energizing simultaneously. Please see the online service manual for more details on SOSO and FOFO sequencing.

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>QPC-ASX</td>
<td>Quadraplex Pump Controller, SOSO sequence</td>
</tr>
<tr>
<td>QPC-ASY</td>
<td>Quadraplex Pump Controller, FOFO sequence</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

- **Power Requirement:** 120 VAC, 50/60 Hz.
- **Power Consumption:** 2.5 VA (approximate).
- **Sensitivity:** 100 k ohm.
- **Isolation Voltage:** 2500 V (input to output).
- **Temperature Limits:**
  - Operating: -4 to 131°F (-20 to 55°C);
  - Storage: -40 to 185°F (-40 to 85°C).
- **Switch Type:** SPST.
- **Switch Voltage:** 5.1 V open circuit.
- **Switching Current:** 10 µA, short circuit.
- **Electrical Rating:** 5 A @ 120 VAC resistive; 278 VA inductive.
- **Response Times:**
  - Power Up: <1 s;
  - Operate: <25 ms;
  - Inrush: 5 s;
  - Release: <150 ms.
- **Indicators:** (4) LED’s show active load.
- **Enclosure:** Polycarbonate dust cover.
- **Mounting:** Surface.
- **Weight:** 16 oz (454 g).
- **Agency Approval:** Intrinsically safe to UL standard 913. For use in hazardous (classified) locations: Class I, Group A, B, C, D; Class II, Group E, F, G; Class III.

**Model LDT-AS, Leak/Over-Temperature Detection Relay**

The Model LDT is used to monitor the shaft seal and the stator temperature of a submersible pump to detect a leak or over-temperature before pump failure. A leak is detected by sensing the status of a float or conductivity switch installed in the seal cavity. When this resistance drops below the set sensitivity, the output relay energizes and the LED indicator illuminates. When the seal failure condition clears, the relay automatically resets. A normally closed temperature switch mounted on the stator detects over-temperature. The temperature safety feature incorporates a bistable relay that retains its position during power loss and latches on until the remote reset button is pressed. The LDT has adjustable leak sensitivity from 1 k to 35 k ohm. Installation is made simple with a surface mount configuration.

<table>
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<tr>
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<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LDT-AS</td>
<td>Leak/Over-Temperature Detection Relay</td>
</tr>
</tbody>
</table>

**SPECIFICATIONS**

- **Power Requirement:** 120 VAC, 50/60 Hz.
- **Power Consumption:** 4 VA (approximate).
- **Sensitivity:** 1 k to 35 k ohm adjustable.
- **Temperature Limits:**
  - Operating: -4 to 131°F (-20 to 55°C);
  - Storage: -40 to 185°F (-40 to 85°C).
- **Sensor Voltage:** 12 VDC.
- **Switch Type:** (2) SPDT.
- **Electrical Rating:** 10 A @ 120 VAC resistive.
- **Response Times:**
  - Leakage trip: 1 s;
  - Leakage reset: 1 s;
  - Temperature trip: 0.1 s.
- **Indicators:**
  - Green LED illuminates under normal operation;
  - Red LED’s illuminate when leak or over-temperature is detected.
- **Enclosure:** Polycarbonate dust cover.
- **Mounting:** Surface mount.
- **Weight:** 17 oz (482 g).
- **Agency Approval:** UL 508.