CIRCULAR CHART RECORDERS
Single and Dual Pen, Rotation Speeds and Recording Times

The Series LCR10 & LCR20 Circular Chart Recorders are two series of circular chart recorders with single and dual pen options. The LCR10 is a single pen recorder and the LCR20 is a dual pen. They can be easily programmed for any of six different thermocouple types, 100 ohm platinum DIN RTDs, or process inputs.

**BENEFITS/FEATURES**
- Uses large 10˝ (254 mm) circular chart to easily read data
- Available with dual pen inputs

**APPLICATIONS**
- Water level monitoring in water treatment
- Temperature/humidity in wood drying
- Room pressure monitoring in clean room applications

**SPECIFICATIONS**

Ranges:
- Thermocouple: Type J, K, T, R, S, B: RTD: 100 Ω platinum DIN curve (0.00385 Ω per Ω per °C); Process: 0 to 5 VDC, 250 Ω impedance, 4-20 mA across 250 Ω.
- Chart Size: 10˝ (254 mm).
- Accuracy: ±0.5% of span (100 division span).
- Output Relay: Form C (DPDT), 1A @ 240 VAC resistive.
- Chart Speed: Programmable 4, 8, 12, 24, 48, 72, 168 hour rotation (168 hours=7 days).

**ACCESSORIES**

Model | Description
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LCR-B | Blue chart pens, package of 6
LCR-R | Red chart pens, package of 6
LCR110C | Chart paper, 0 to 110°C, 24 hour, CCW
LCR200 | Chart paper, 0 to 200°F, 24 hour, CCW
LCR2007 | Chart paper, 0 to 200°F, 7 day, CCW

**MODEL CHART**

<table>
<thead>
<tr>
<th>Model</th>
<th>Rotation</th>
<th>Pen Inputs</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>LCR10-10</td>
<td>Counter-clockwise</td>
<td>Single</td>
<td>No</td>
</tr>
<tr>
<td>LCR10-11</td>
<td>Counter-clockwise</td>
<td>Single</td>
<td>Yes</td>
</tr>
<tr>
<td>LCR20-10</td>
<td>Counter-clockwise</td>
<td>Dual</td>
<td>No</td>
</tr>
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<td>LCR20-11</td>
<td>Counter-clockwise</td>
<td>Dual</td>
<td>Yes</td>
</tr>
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<tr>
<td>HTDL-DS</td>
<td>Docking station and USB interface</td>
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</tbody>
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**HIGH TEMPERATURE DATA LOGGER**
Submersible, Continuous Recording, User Replaceable Battery

The Model HTDL-20/30 High Temperature Data Logger can measure temperatures up to 500°F (260°C) and record up to 65,536 measurements.

**BENEFITS/FEATURES**
- Submersible and portable
- Temperature measurement up to 500°F
- Log readings in ovens or chambers with the remote probe option
- Delay startup timer

**APPLICATIONS**
- Thermal testing
- Process monitoring or troubleshooting

**SPECIFICATIONS**

Range: -328 to 500°F (-200 to 260°C).
- Memory Size: 65,536 readings.
- Accuracy: 0.18°F (0.1°C) @ 68 to 284°F (20 to 140°C); 0.54°F (0.3°C) @ -4 to 67.98°F (-20 to 19.99°C); 0.72°F (0.4°C) @ -40 to -4°F (-40 to –20°C).
- Resolution: 0.02°F (0.01°C).
- Temperature Limits: -40 to 284°F (-40 to 140°C).
- Sampling Method: Stop on memory full or continuous recording.

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<td>HTDL-20</td>
<td>High temperature data logger with 2˝ rigid probe</td>
</tr>
<tr>
<td>HTDL-30</td>
<td>High temperature data logger with 24˝ flexible probe</td>
</tr>
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