Ledex® Rotary Solenoids  Size 1E Precision Elongated Coil

Performance Specifications

<table>
<thead>
<tr>
<th>Stroke</th>
<th>Holding Torque (lb-in) @ 20°C</th>
<th>Starting Torque (lb-in) @ 20°C</th>
<th>Maximum Duty Cycle</th>
</tr>
</thead>
<tbody>
<tr>
<td>25°</td>
<td>0.28</td>
<td>0.2</td>
<td>0.4</td>
</tr>
<tr>
<td>35°</td>
<td>0.15</td>
<td>0.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

All data is at 20°C coil temperature. Force (torque) outputs degrade with elevated temperatures.

1 Gross starting torques are shown. For net available starting torque, subtract return spring torque of 0.06 lb.-in. ±20%.
2 Holding torque is shown at the stabilized temperature of 105°C and continuous duty.
* Consult factory.

How to Order

1. Using the Performance Chart to the left, select one of the five columns which provides the appropriate duty cycle for your application. Reading down this column locate the torque for the stroke you need. For net available starting torque, subtract return spring torque of 0.06 lb.-in. ±20% (if torque is insufficient go to next larger solenoid size).
2. Use the chart below to select the model number corresponding to your desired design, stroke and direction of rotation (as viewed from armature end, opposite mounting studs).
3. Using the Specification Chart to the right, select the same duty cycle column. Follow down the column into the VDC ratings. Select the voltage which most closely matches your supply voltage. Read across to the left to select the coil awg suffix.
4. Replace the last two digits of the model number (XX) with the coil awg number to complete the part number.

Please see www.ledex.com (click on Stock Products tab) for our list of stock products available through our North American distributors.

Well-suited for battery operation. See the “Battery Operated Solenoids” section for complete information.

All catalog products manufactured after April 1, 2006 are RoHS Compliant.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>25° CW</td>
<td>0.025”</td>
<td>H-1142-0XX</td>
<td>L-1142-0XX</td>
<td>H-1140-0XX</td>
<td>L-1140-0XX</td>
<td>H-15097-0XX</td>
<td>L-15097-0XX</td>
</tr>
<tr>
<td>25° CCW</td>
<td>0.025”</td>
<td>H-1145-0XX</td>
<td>L-1145-0XX</td>
<td>H-1144-0XX</td>
<td>L-1144-0XX</td>
<td>H-3334-0XX</td>
<td>L-3334-0XX</td>
</tr>
<tr>
<td>35° CW</td>
<td>0.030”</td>
<td>H-15201-0XX</td>
<td>L-15201-0XX</td>
<td>H-15205-0XX</td>
<td>L-15205-0XX</td>
<td>H-15207-0XX</td>
<td>L-15207-0XX</td>
</tr>
<tr>
<td>35° CCW</td>
<td>0.030”</td>
<td>H-15202-0XX</td>
<td>L-15202-0XX</td>
<td>H-15206-0XX</td>
<td>L-15206-0XX</td>
<td>H-15208-0XX</td>
<td>L-15208-0XX</td>
</tr>
<tr>
<td>45° CW</td>
<td>0.025”</td>
<td>H-1148-0XX</td>
<td>L-1148-0XX</td>
<td>H-1147-0XX</td>
<td>L-1147-0XX</td>
<td>H-15039-0XX</td>
<td>L-15039-0XX</td>
</tr>
<tr>
<td>45° CCW</td>
<td>0.025”</td>
<td>H-1150-0XX</td>
<td>L-1150-0XX</td>
<td>H-1149-0XX</td>
<td>L-1149-0XX</td>
<td>H-15148-0XX</td>
<td>L-15148-0XX</td>
</tr>
</tbody>
</table>

* Direction of rotation (cw – clockwise or ccw – counterclockwise) is viewed from the armature end of the solenoid opposite the mounting studs.

Note: The XX in the part number suffix must be filled in with the awg of your choice.
### General Specifications

**Dielectric Strength** 1000 VRMS, all coils

**Recommended**

**Minimum Heat Sink**

All specifications subject to change without notice.

**Coil Resistance** ±5% tolerance

**Starting Torque** Gross torque values are shown. For net starting torque, subtract return spring torque

**Return Spring Torque** 0.06 pound-inches ±20%

**Weight** 1.5 oz (42.5 gms)

**Dimensions** See page D28

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### Coil Specifications

<table>
<thead>
<tr>
<th>Maximum Duty Cycle</th>
<th>100%</th>
<th>50%</th>
<th>25%</th>
<th>10%</th>
<th>5%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum ON Time (sec)</td>
<td>∞</td>
<td>100</td>
<td>36</td>
<td>7</td>
<td>2.5</td>
</tr>
<tr>
<td>Maximum ON Time (sec) for single pulse</td>
<td>∞</td>
<td>162</td>
<td>44</td>
<td>8</td>
<td>2.8</td>
</tr>
<tr>
<td>Watts (@ 20°C)</td>
<td>10.5</td>
<td>21</td>
<td>54</td>
<td>108</td>
<td></td>
</tr>
<tr>
<td>Ampere Turns (@ 20°C)</td>
<td>2692</td>
<td>695</td>
<td>1105</td>
<td>1560</td>
<td></td>
</tr>
<tr>
<td><strong>Coil Data</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>awg</td>
<td>Resistance (@20°C)</td>
<td># Turns</td>
<td>VDC (Nom)</td>
<td>VDC (Nom)</td>
<td>VDC (Nom)</td>
</tr>
<tr>
<td>------</td>
<td>-------------------</td>
<td>---------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
</tr>
<tr>
<td>25</td>
<td>0.83</td>
<td>140</td>
<td>2.9</td>
<td>4.1</td>
<td>6.5</td>
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<tr>
<td>26</td>
<td>1.38</td>
<td>186</td>
<td>3.7</td>
<td>5.2</td>
<td>8.2</td>
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<tr>
<td>27</td>
<td>1.91</td>
<td>210</td>
<td>4.5</td>
<td>6.3</td>
<td>10.1</td>
</tr>
<tr>
<td>28</td>
<td>3.17</td>
<td>273</td>
<td>5.7</td>
<td>8.1</td>
<td>12.8</td>
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<tr>
<td>29</td>
<td>5.17</td>
<td>352</td>
<td>7.2</td>
<td>10.2</td>
<td>16.2</td>
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<tr>
<td>30</td>
<td>8.25</td>
<td>441</td>
<td>9.2</td>
<td>13.0</td>
<td>21.0</td>
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<tr>
<td>31</td>
<td>12.95</td>
<td>550</td>
<td>11.6</td>
<td>16.4</td>
<td>26.0</td>
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<tr>
<td>32</td>
<td>20.71</td>
<td>682</td>
<td>14.9</td>
<td>21.0</td>
<td>34.0</td>
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<tr>
<td>33</td>
<td>30.60</td>
<td>828</td>
<td>18.2</td>
<td>26.0</td>
<td>41.0</td>
</tr>
<tr>
<td>34</td>
<td>50.95</td>
<td>1078</td>
<td>23.0</td>
<td>33.0</td>
<td>52.0</td>
</tr>
<tr>
<td>35</td>
<td>83.92</td>
<td>1392</td>
<td>30.0</td>
<td>42.0</td>
<td>67.0</td>
</tr>
</tbody>
</table>

1. Continuously pulsed at stated watts and duty cycle.
2. Single pulse at stated watts (with coil at ambient room temperature 20°C).
3. Other coil awg sizes available, consult factory.
4. Reference number of turns.
5. Consult factory.

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**Rotary Solenoids**

- No shafts
- 3 tapped holes
- Return spring
- Armature end shaft
- 3 tapped holes
- Return spring
- Base end shaft
- 3 tapped holes
- Return spring
- Double shaft
- 3 tapped holes
- Return spring

Ledex® Rotary Solenoids

Size 1E Precision Elongated Coil

- H-1143-0XX  L-1143-0XX
- H-1446-0XX  L-1146-0XX
- H-15206-0XX  L-15206-0XX
- H-15203-0XX  L-15203-0XX
- H-1141-0XX  L-1141-0XX
- H-1151-0XX  L-1151-0XX
- H-15211-0XX  L-15211-0XX
- H-15212-0XX  L-15212-0XX
- H-15213-0XX  L-15213-0XX
- H-15214-0XX  L-15214-0XX
- H-15215-0XX  L-15215-0XX
- H-15216-0XX  L-15216-0XX
- H-1305-0XX  L-1305-0XX
- H-15217-0XX  L-15217-0XX
- H-15218-0XX  L-15218-0XX
- H-15219-0XX  L-15219-0XX
- H-15085-0XX  L-15085-0XX
- H-15086-0XX  L-15086-0XX
- H-15087-0XX  L-15087-0XX
- H-15088-0XX  L-15088-0XX

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Ledex® Solenoids

D11  www.ledex.com  1.937.454.2345  Fax: 1.937.898.8624
**Ledex® Rotary Solenoids 1E Dimensions**

**Inches (mm)**

**Armature Cover Configuration — Armature End Shaft**

1.031 +0.031 -0.010 (26.19) (+/-0.787 -0.254) dia

0.156 +/-0.001 (3.967) (+/-0.305) dia

0.33 (8.38)

3 holes equally spaced located 1/2 rotary stroke +/-3° to left of center for R.H. stroke, right of center for L.H. stroke. 3-48 thread

1.050 +/- 0.015 (26.70) (+/-0.381) dia

0.733 (18.65)

No Shaft

Base End Shaft

Armature End Shaft

Double Shaft

**Armature Cover Configuration — Base End Shaft**

1.031 +0.031 -0.010 (26.19) (+/-0.787 -0.254) dia

0.361 +/-0.015 (9.17) (+/-0.381) dia

0.33 (8.38)

See Note #1

1.050 +/- 0.015 (26.70) (+/-0.381) dia

0.733 (18.65)

No Shaft

Base End Shaft

Armature End Shaft

Double Shaft

**Armature Cover Configuration — Double Shaft**

1.031 +0.031 -0.010 (26.19) (+/-0.787 -0.254) dia

0.361 +/-0.015 (9.17) (+/-0.381) dia

0.33 (8.38)

See Note #1

1.050 +/- 0.015 (26.70) (+/-0.381) dia

0.733 (18.65)

No Shaft

Base End Shaft

Armature End Shaft

Double Shaft

**Notes:**

1) All configurations have 10" (254 mm) minimum leads, 24 awg. PVC insulation.

2) For electrical specs and performance charts, see pages D10-D11.

All specifications subject to change without notice.

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**Ledex® Solenoids**

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