

# Ledex® Rotary Solenoids Size 5S Precision Standard Coil

## Performance Specifications

| Stroke | Holding Torque <sup>2</sup><br>(lb-in) | Starting Torque (lb-in) <sup>1</sup> @ 20°C<br>Maximum Duty Cycle |     |     |      |      |
|--------|----------------------------------------|-------------------------------------------------------------------|-----|-----|------|------|
|        |                                        | 100%                                                              | 50% | 25% | 10%  | 5%   |
| 25°    | 5.0                                    | 1.9                                                               | 4.1 | 7.3 | 12.1 | 13.2 |
| 35°    | *                                      | 1.2                                                               | 2.6 | 4.5 | 7.8  | 9.2  |
| 45°    | 3.0                                    | 0.7                                                               | 1.7 | 3.4 | 6.3  | 6.9  |
| 55°    | *                                      | *                                                                 | *   | *   | *    | *    |
| 67½°   | *                                      | 0.5                                                               | 1.2 | 2.2 | 3.9  | 4.9  |
| 75°    | *                                      | *                                                                 | *   | *   | *    | *    |
| 95°    | 2.0                                    | 0.2                                                               | 0.5 | 1.0 | 1.9  | 2.6  |
| 110°   | *                                      | *                                                                 | *   | *   | *    | *    |

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

<sup>1</sup> Gross starting torques are shown. For net available starting torque, subtract return spring torque of 0.25 lb.-in. ±20%.

<sup>2</sup> Holding torque is shown at the stabilized temperature of 105°C and continuous duty.

\* Consult factory.

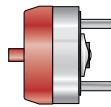
## How to Order

- 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 0.25 lb.-in. ±20% (if torque is insufficient go to next larger solenoid size).
- 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).
- 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.
- Replace the last two digits of the model number (XX) with the coil awg number to complete the part number.

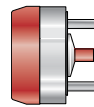
Please see [www.ledex.com](http://www.ledex.com) (click on Stock Products tab) for our list of stock products available through our North American distributors.

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

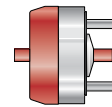
- Armature cover
- Armature end shaft
- Return spring



- Armature cover
- Base end shaft
- Return spring



- Armature cover
- Double shaft
- Return spring



| Stroke/<br>Direction* | Nom. Axial<br>Stroke | Standard    |            | Long Life   |            | Standard    |             | Long Life |           | Standard |           | Long Life |           |
|-----------------------|----------------------|-------------|------------|-------------|------------|-------------|-------------|-----------|-----------|----------|-----------|-----------|-----------|
|                       |                      | Standard    | Long Life  | Standard    | Long Life  | Standard    | Long Life   | Standard  | Long Life | Standard | Long Life | Standard  | Long Life |
| 25° CW                | 0.042"               | H-2480-0XX  | L-2480-0XX | H-2073-0XX  | L-2073-0XX | H-15165-0XX | L-15165-0XX |           |           |          |           |           |           |
| 25° CCW               | 0.042"               | H-2657-0XX  | L-2657-0XX | H-2593-0XX  | L-2593-0XX | H-3421-0XX  | L-3421-0XX  |           |           |          |           |           |           |
| 35° CW                | 0.045"               | H-2658-0XX  | L-2658-0XX | H-2681-0XX  | L-2681-0XX | H-2874-0XX  | L-2874-0XX  |           |           |          |           |           |           |
| 35° CCW               | 0.045"               | H-3384-0XX  | L-3384-0XX | H-2479-0XX  | L-2479-0XX | H-1423-0XX  | L-1423-0XX  |           |           |          |           |           |           |
| 45° CW                | 0.045"               | H-2527-0XX  | L-2527-0XX | H-2383-0XX  | L-2383-0XX | H-1345-0XX  | L-1345-0XX  |           |           |          |           |           |           |
| 45° CCW               | 0.045"               | H-1125-0XX  | L-1125-0XX | H-2300-0XX  | L-2300-0XX | H-15072-0XX | L-15072-0XX |           |           |          |           |           |           |
| 55° CW                | 0.048"               | H-15305-0XX | —          | H-15310-0XX | —          | H-15315-0XX | —           |           |           |          |           |           |           |
| 55° CCW               | 0.048"               | H-15306-0XX | —          | H-15311-0XX | —          | H-15316-0XX | —           |           |           |          |           |           |           |
| 67½° CW               | 0.050"               | H-1390-0XX  | —          | H-2349-0XX  | —          | H-3375-0XX  | —           |           |           |          |           |           |           |
| 67½° CCW              | 0.050"               | H-3385-0XX  | —          | H-2262-0XX  | —          | H-3377-0XX  | —           |           |           |          |           |           |           |
| 75° CCW               | 0.050"               | H-15307-0XX | —          | H-15312-0XX | —          | H-15317-0XX | —           |           |           |          |           |           |           |
| 95° CW                | 0.055"               | H-2010-0XX  | —          | H-2382-0XX  | —          | H-15150-0XX | —           |           |           |          |           |           |           |
| 95° CCW               | 0.055"               | H-1248-0XX  | —          | H-2747-0XX  | —          | H-15131-0XX | —           |           |           |          |           |           |           |
| 110° CW               | 0.055"               | H-15308-0XX | —          | H-15313-0XX | —          | H-15318-0XX | —           |           |           |          |           |           |           |
| 110° CCW              | 0.055"               | H-15309-0XX | —          | H-15314-0XX | —          | H-15319-0XX | —           |           |           |          |           |           |           |

\* 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.

# Ledex® Rotary Solenoids Size 5S Precision Standard Coil

## Coil Specifications

|                                                                |      |      |      |      |      |
|----------------------------------------------------------------|------|------|------|------|------|
| Maximum Duty Cycle                                             | 100% | 50%  | 25%  | 10%  | 5%   |
| Maximum ON Time (sec)<br>when pulsed continuously <sup>1</sup> | ∞    | 100  | 36   | 10   | 3.5  |
| Maximum ON Time (sec)<br>for single pulse <sup>2</sup>         | ∞    | 160  | 44   | 13   | 4.6  |
| Watts (@ 20°C)                                                 | 21   | 42   | 84   | 210  | 420  |
| Ampere Turns (@ 20°C)                                          | 860  | 1220 | 1720 | 2730 | 3853 |

### Coil Data

| awg<br>(0XX) <sup>3</sup> | Resistance<br>(@20°C) | #<br>Turns <sup>4</sup> | VDC<br>(Nom) | VDC<br>(Nom) | VDC<br>(Nom) | VDC<br>(Nom) | VDC<br>(Nom) |
|---------------------------|-----------------------|-------------------------|--------------|--------------|--------------|--------------|--------------|
| 23                        | 2.03                  | 288                     | 6.1          | 8.6          | 12.1         | 19.2         | 27.0         |
| 24                        | 3.20                  | 360                     | 7.6          | 10.8         | 15.3         | 24.0         | 34.0         |
| 25                        | 4.91                  | 440                     | 9.6          | 13.6         | 19.2         | 31.0         | 43.0         |
| 26                        | 7.72                  | 550                     | 12.1         | 17.1         | 24.0         | 38.0         | 54.0         |
| 27                        | 11.12                 | 636                     | 15.0         | 21.0         | 30.0         | 48.0         | 67.0         |
| 28                        | 18.79                 | 840                     | 19.2         | 27.0         | 39.0         | 61.0         | 86.0         |
| 29                        | 30.48                 | 1088                    | 24.0         | 34.0         | 48.0         | 77.0         | 108.0        |
| 30                        | 44.86                 | 1275                    | 30.0         | 43.0         | 61.0         | 96.0         | 136.0        |
| 31                        | 70.90                 | 1596                    | 38.0         | 54.0         | 76.0         | 121.0        | 171.0        |
| 32                        | 109.00                | 1974                    | 47.0         | 67.0         | 95.0         | 150.0        | 212.0        |
| 33                        | 175.00                | 2496                    | 60.0         | 86.0         | 121.0        | 192.0        | 271.0        |

## General Specifications

|                                  |                                                                                                                                                                                                           |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Dielectric Strength              | 23 awg, 1000 VRMS;<br>24-33 awg, 1200 VRMS                                                                                                                                                                |
| Recommended<br>Minimum Heat Sink | Maximum watts dissipated<br>by solenoid are based on an<br>unrestricted flow of air at 20°C, with<br>solenoid mounted on the equivalent<br>of an aluminum plate measuring 7 1/2"<br>square by 1/8" thick. |
| Coil Resistance                  | ±5% tolerance                                                                                                                                                                                             |
| Starting Torque                  | Gross torque values are shown. For<br>net starting torque, subtract return<br>spring torque                                                                                                               |
| Return Spring Torque             | 0.25 pound-inches ±20%                                                                                                                                                                                    |
| Weight                           | 9.0 oz (255.2 gms)                                                                                                                                                                                        |
| Dimensions                       | See page D34                                                                                                                                                                                              |

<sup>1</sup> Continuously pulsed at stated watts and duty cycle.

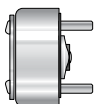
<sup>2</sup> Single pulse at stated watts (with coil at ambient room  
temperature 20°C).

<sup>3</sup> Other coil awg sizes available, consult factory.

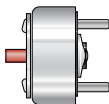
<sup>4</sup> Reference number of turns.

All specifications subject to change without notice.

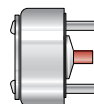
- No shafts
- 3 tapped holes
- Return spring



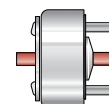
- Armature end shaft
- 3 tapped holes
- Return spring



- Base end shaft
- 3 tapped holes
- Return spring



- Double shaft
- 3 tapped holes
- Return spring



ROTARY Solenoids

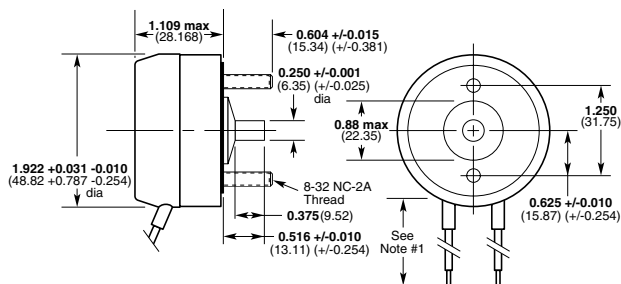
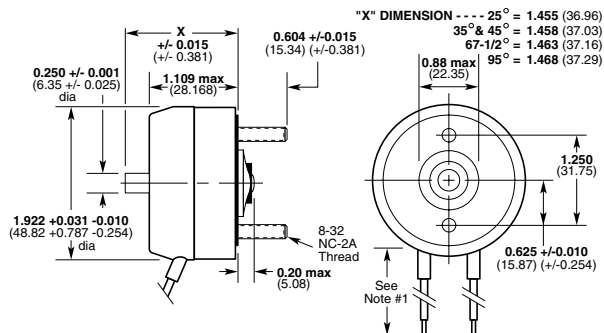
| Standard    | Long Life  | Standard    | Long Life  | Standard    | Long Life  | Standard    | Long Life  |
|-------------|------------|-------------|------------|-------------|------------|-------------|------------|
| H-1082-0XX  | L-1082-0XX | H-2668-0XX  | L-2668-0XX | H-2050-0XX  | L-2050-0XX | H-2414-0XX  | L-2414-0XX |
| H-2434-0XX  | L-2434-0XX | H-2669-0XX  | L-2669-0XX | H-3189-0XX  | L-3189-0XX | H-2708-0XX  | L-2708-0XX |
| H-2560-0XX  | L-2560-0XX | H-3151-0XX  | L-3151-0XX | H-2186-0XX  | L-2186-0XX | H-2875-0XX  | L-2875-0XX |
| H-1087-0XX  | L-1087-0XX | H-1431-0XX  | L-1431-0XX | H-3276-0XX  | L-3276-0XX | H-2016-0XX  | L-2016-0XX |
| H-2397-0XX  | L-2397-0XX | H-2555-0XX  | L-2555-0XX | H-2136-0XX  | L-2136-0XX | H-3397-0XX  | L-3397-0XX |
| H-2185-0XX  | L-2185-0XX | H-3238-0XX  | L-3238-0XX | H-1308-0XX  | L-1308-0XX | H-2845-0XX  | L-2845-0XX |
| H-15320-0XX | —          | H-15325-0XX | —          | H-15330-0XX | —          | H-15335-0XX | —          |
| H-15321-0XX | —          | H-15326-0XX | —          | H-15331-0XX | —          | H-15336-0XX | —          |
| H-2522-0XX  | —          | H-2075-0XX  | —          | H-1020-0XX  | —          | H-3399-0XX  | —          |
| H-2902-0XX  | —          | H-3249-0XX  | —          | H-15055-0XX | —          | H-3400-0XX  | —          |
| H-15322-0XX | —          | H-15327-0XX | —          | H-15332-0XX | —          | H-15337-0XX | —          |
| H-2714-0XX  | —          | H-2074-0XX  | —          | H-2957-0XX  | —          | H-1155-0XX  | —          |
| H-2296-0XX  | —          | H-2150-0XX  | —          | H-1307-0XX  | —          | H-1154-0XX  | —          |
| H-15323-0XX | —          | H-15328-0XX | —          | H-15333-0XX | —          | H-15338-0XX | —          |
| H-15324-0XX | —          | H-15329-0XX | —          | H-15334-0XX | —          | H-15339-0XX | —          |

# Ledex® Rotary Solenoids 5S Dimensions

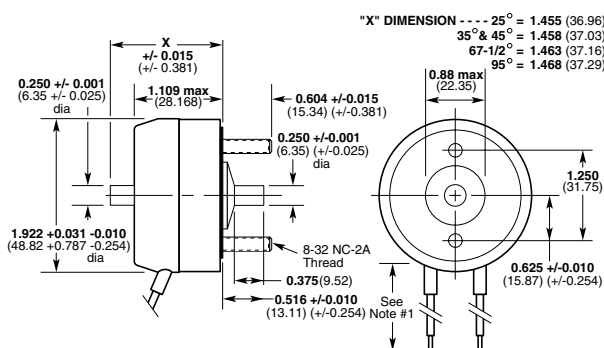
Inches (mm)

## Armature Cover Configuration — Armature End Shaft

## Armature Cover Configuration — Base End Shaft



## Armature Cover Configuration — Double Shaft

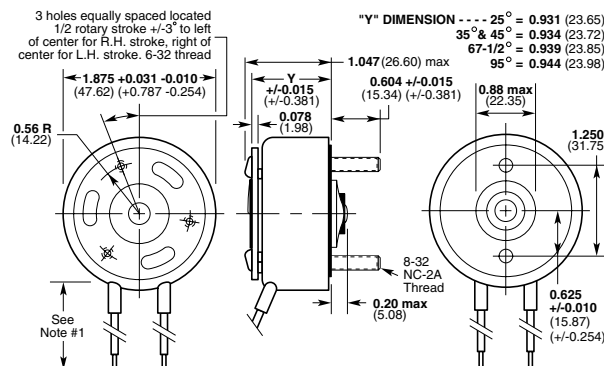


### Notes:

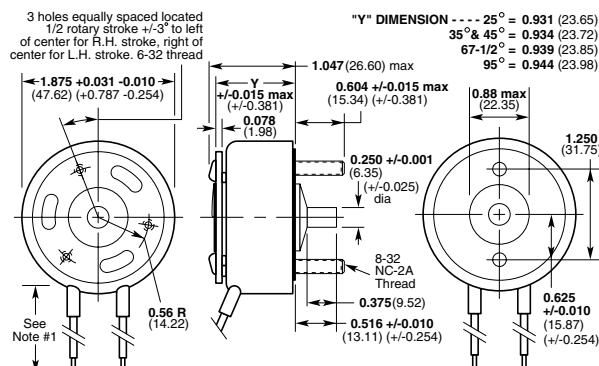
- 1) All configurations have 10" (254 mm) minimum leads, 20 awg. PVC insulation.
- 2) For electrical specs and performance charts, see pages D22-D23.

All specifications subject to change without notice.

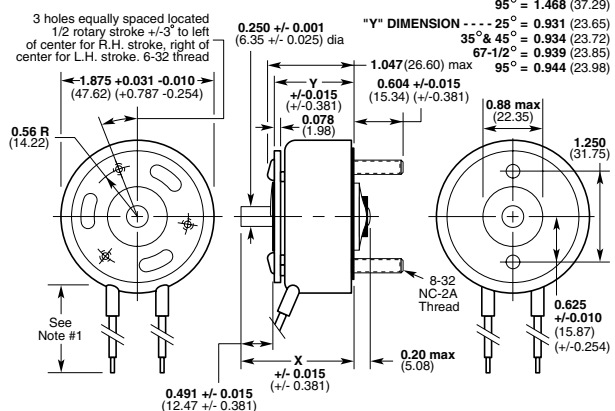
## No Shaft



## Base End Shaft



## Armature End Shaft



## Double Shaft

