# Rotary Solenoid

# Size 5E

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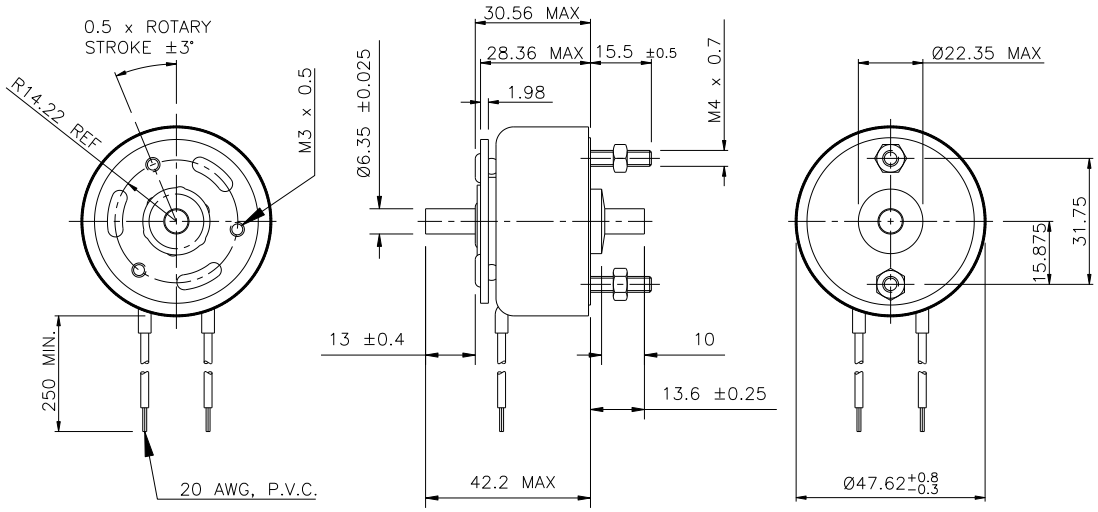
## Dimensions




**Solenoid shown in the de-energised position**

## Performance Specifications

**Starting Torque (mNm) @ 20° C**

| Maximum Duty Cycle | | 100% | 50% | 25% | 10% | 5% |
|---|---|---|---|---|---|---|
| **Stroke** | **Holding Torque** | | | | | |
| 25° | 565 | 237.3 | 576.3 | 915.3 | 1288.2 | 1491.6 |
| 35° | - | 192.1 | 361.6 | 576.3 | 858.8 | 971.8 |
| 45° | 339 | 135.6 | 248.6 | 429.4 | 666.7 | 813.6 |
| 67.5° | - | 90.4 | 169.5 | 282.5 | 440.7 | 519.8 |
| 95° | 226 | 33.9 | 79.1 | 135.6 | 226.0 | 293.8 |

## General Specifications

**Dielectric Strength:**
22-23 awg. 1000 VRMS
24-33 awg. 1200 VRMS

**Coil Resistance:**
+/- 5% tolerance

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

**Return Spring Torque:**
28.2mNm +/- 20%

**Weight:** 312 g

**Recommended Heat Sink:** Maximum watts dissipated by the solenoid are based on an unrestricted flow of air at 20°C mounted on the equivalent of an aluminium plate 190.5 x 190.5 x 3.2mm min.

## Coil Specifications

| Maximum Duty Cycle | 100% | 50% | 25% | 10% | 5% |
|---|---|---|---|---|---|
| Maximum ON Time (sec) when pulsed continuously | | 100 | 36 | 10 | 3.5 |
| Maximum ON Time (sec)for single pulse | | 162 | 44 | 13 | 4.6 |
| Watts (@ 20° C) | 21 | 42 | 84 | 210 | 420 |
| Ampere Turns (@ 20° C) | 1015 | 1440 | 2030 | 3210 | 4650 |

**Coil Data**

| awg. | Resistance (@ 20°C) | # Turns | Nominal DC Voltage | | | | |
|---|---|---|---|---|---|---|---|
| 22 | 1.68 | 301 | 5.9 | 8.4 | 11.9 | 18.8 | 26.6 |
| 23 | 2.70 | 384 | 7.5 | 10.6 | 15.1 | 23.8 | 33.7 |
| 24 | 4.30 | 486 | 9.5 | 13.4 | 19.0 | 30.0 | 42.5 |
| 25 | 6.66 | 590 | 11.8 | 16.7 | 23.7 | 37.4 | 52.9 |
| 26 | 10.30 | 737 | 14.7 | 20.8 | 29.4 | 46.5 | 65.8 |
| 27 | 15.70 | 900 | 18.2 | 25.7 | 36.3 | 57.4 | 81.2 |
| 28 | 26.60 | 1190 | 23.6 | 33.4 | 47.3 | 74.7 | 105.7 |
| 29 | 38.00 | 1380 | 28.2 | 39.9 | 56.5 | 89.3 | 126.3 |
| 30 | 62.10 | 1768 | 36.1 | 51.1 | 72.2 | 114.0 | 161.0 |
| 31 | 96.10 | 2166 | 44.9 | 63.5 | 89.8 | 142.0 | 201.0 |
| 32 | 157.00 | 2816 | 57.4 | 81.2 | 115.0 | 182.0 | 257.0 |
| 33 | 241.00 | 3432 | 71.1 | 101.0 | 142.0 | 225.0 | 318.0 |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## X Feature Configurations & Part Numbers

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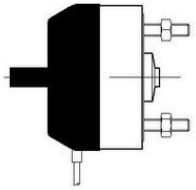
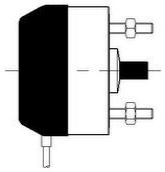
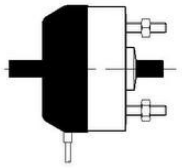
### How to Order

**Replace 'XX' with coil AWG required see coil specification table**

| Description | Stroke/ | Nom. Axial | Armature Cover x 8<br>Armature End Shaft x 4<br>Return Spring x 9  | | Armature Cover x 8<br>Base End Shaft x 3<br>Return Spring x 9  | | Armature Cover x 8<br>Double Shaft x 3 x 4<br>Return Spring x 9  | |
|---|---|---|---|---|---|---|---|---|
| Direction of rotation as viewed from armature end, opposite mounting studs | | | Standard | Endurance Engineered | Standard | Endurance Engineered | Standard | Endurance Engineered |
| 5E Rotary | 25°RH | 1.1 | M15037-0XX | E15037-0XX | M2361-0XX | E2361-0XX | M15253-0XX | E15253-0XX |
| 5E Rotary | 25°LH | 1.1 | M3199-0XX | E3199-0XX | M2449-0XX | E2449-0XX | M15254-0XX | E15254-0XX |
| 5E Rotary | 35°RH | 1.1 | M2717-0XX | E2717-0XX | M2804-0XX | E2804-0XX | M15255-0XX | E15255-0XX |
| 5E Rotary | 35°LH | 1.1 | M15240-0XX | E15240-0XX | M2805-0XX | E2805-0XX | M15256-0XX | E15256-0XX |
| 5E Rotary | 45°RH | 1.1 | M15241-0XX | E15241-0XX | M2043-0XX | E2043-0XX | M15257-0XX | E15257-0XX |
| 5E Rotary | 45°LH | 1.1 | M15106-0XX | E15106-0XX | M2615-0XX | E2615-0XX | M15258-0XX | E15258-0XX |
| 5E Rotary | 67.5°RH | 1.3 | M15168-0XX | E15168-0XX | M1454-0XX | E1454-0XX | M15261-0XX | E15261-0XX |
| 5E Rotary | 67.5°LH | 1.3 | M15169-0XX | E15169-0XX | M15251-0XX | E15251-0XX | M15262-0XX | E15262-0XX |
| 5E Rotary | 95°RH | 1.4 | M15245-0XX | E15245-0XX | M1031-0XX | E1031-0XX | M15264-0XX | E15264-0XX |
| 5E Rotary | 95°LH | 1.4 | M15246-0XX | E15246-0XX | M1513-0XX | E1513-0XX | M15265-0XX | E15265-0XX |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## X Feature Configurations & Part Numbers

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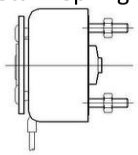
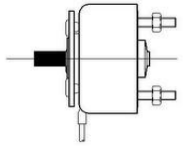
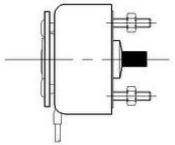
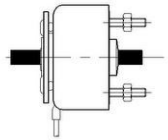
### How to Order

**Replace 'XX' with coil AWG required see coil specification table**

| Description | Stroke/ | Nom. Axial | No Shafts<br>3 Tapped Holes x 6<br>Return Spring x 9  | | Armature End Shaft x 4<br>3 Tapped Holes x 6<br>Return Spring x 9  | | Base End Shaft x 3<br>3 Tapped Holes x 6<br>Return Spring x 9  | | Double Shaft x 3 x 4<br>3 Tapped Holes x 6<br>Return Spring x 9  | |
|---|---|---|---|---|---|---|---|---|---|---|
| Direction of rotation as viewed from armature end, opposite mounting studs | | | Standard | Endurance Engineered | Standard | Endurance Engineered | Standard | Endurance Engineered | Standard | Endurance Engineered |
| 5E Rotary | 25°RH | 1.1 | M2729-0XX | E2729-0XX | M3370-0XX | E3370-0XX | M1128-0XX | E1128-0XX | M1375-0XX | E1375-0XX |
| 5E Rotary | 25°LH | 1.1 | M1053-0XX | E1053-0XX | M1167-0XX | E1167-0XX | M15283-0XX | E15283-0XX | M15295-0XX | E15295-0XX |
| 5E Rotary | 35°RH | 1.1 | M3183-0XX | E3183-0XX | M15274-0XX | E15274- | M15284-0XX | E15284-0XX | M2894-0XX | E2894-0XX |
| 5E Rotary | 35°LH | 1.1 | M3184-0XX | E3184-0XX | M15275-0XX | E15275- | M15285-0XX | E15285-0XX | M15296-0XX | E15296-0XX |
| 5E Rotary | 45°RH | 1.1 | M2064-0XX | E2064-0XX | M1418-0XX | E1418-0XX | M15286-0XX | E15286-0XX | M2617-0XX | E2617-0XX |
| 5E Rotary | 45°LH | 1.1 | M1460-0XX | E1460-0XX | M1233-0XX | E1233-0XX | M15287-0XX | E15287-0XX | M15297-0XX | E15297-0XX |
| 5E Rotary | 67.5°RH | 1.3 | M15270-0XX | E15270-0XX | M3115-0XX | E3115-0XX | M2454-0XX | E2454-0XX | M1386-0XX | E1386-0XX |
| 5E Rotary | 67.5°LH | 1.3 | M1341-0XX | E1341-0XX | M15278-0XX | E15278- | M15290-0XX | E15290-0XX | M15300-0XX | E15300-0XX |
| 5E Rotary | 95°RH | 1.4 | M2580-0XX | E2580-0XX | M1393-0XX | E1393-0XX | M2455-0XX | E2455-0XX | M3056-0XX | E3056-0XX |
| 5E Rotary | 95°LH | 1.4 | M2475-0XX | E2475-0XX | M15280-0XX | E15280- | M15292-0XX | E15292-0XX | M15302-0XX | E15302-0XX |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