

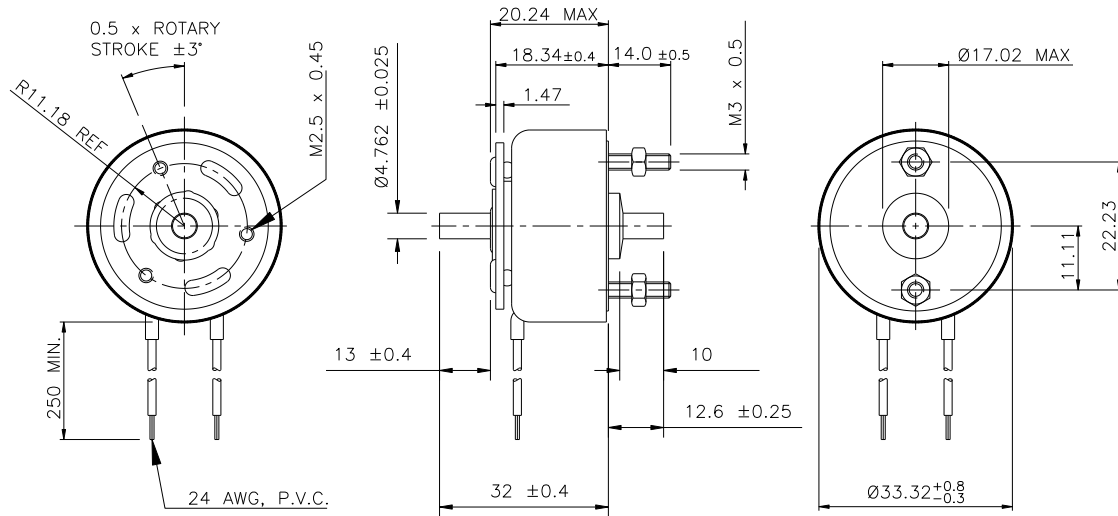
Rotary Solenoid

Size 3E



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for a changing world

Dimensions



Solenoid shown in the de-energised position

Performance Specifications

| Starting Torque (mNm) @ 20° C | | | | | | |
|-------------------------------|----------------|-------|------|-------|-------|-------|
| Max. Duty Cycle | 100% | 50% | 25% | 10% | 5% | |
| Stroke | Holding Torque | | | | | |
| 25° | 101.7 | 39.55 | 90.4 | 158.2 | 305.1 | 361.6 |
| 35° | 79.1 | 29.38 | 67.8 | 113.0 | 226.0 | 259.9 |
| 45° | 67.8 | 16.95 | 45.2 | 90.4 | 158.2 | 203.4 |
| 67.5° | 56.5 | 11.3 | 22.6 | 45.2 | 79.1 | 101.7 |

General Specifications

Dielectric Strength:
23-27 awg. 1000 VRMS
28-33 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:
13.6 mNm +/- 20%

Weight: 92.2 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 117.5 x 117.5 x 3.2mm min.

Coil Specifications

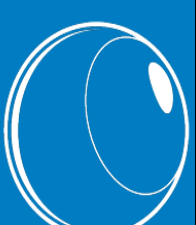
| Maximum Duty Cycle | 100% | 50% | 25% | 10% | 5% |
|--|------|-----|------|------|------|
| Maximum ON Time (sec) when pulsed continuously | | 100 | 36 | 8 | 2.8 |
| Maximum ON Time (sec) for single pulse | | 162 | 44 | 9 | 3.2 |
| Watts (@ 20° C) | 9 | 18 | 36 | 90 | 180 |
| Ampere Turns (@ 20° C) | 535 | 756 | 1070 | 1690 | 2397 |

Coil Data

| awg. | Resistance | # Turns | Nominal DC Voltage | | | | |
|------|------------|---------|--------------------|------|------|------|-------|
| 23 | 0.70 | 145 | 2.6 | 3.7 | 5.2 | 8.2 | 11.6 |
| 24 | 1.18 | 192 | 3.3 | 4.6 | 6.6 | 10.4 | 14.7 |
| 25 | 1.97 | 252 | 4.2 | 5.9 | 8.4 | 13.2 | 18.7 |
| 26 | 3.26 | 328 | 5.3 | 7.5 | 10.6 | 16.8 | 24.0 |
| 27 | 5.04 | 405 | 6.7 | 9.4 | 13.3 | 21.0 | 30.0 |
| 28 | 8.02 | 510 | 8.4 | 11.9 | 16.8 | 27.0 | 38.0 |
| 29 | 12.21 | 627 | 10.4 | 14.7 | 21.0 | 33.0 | 47.0 |
| 30 | 19.20 | 780 | 13.2 | 18.6 | 26.0 | 42.0 | 59.0 |
| 31 | 31.84 | 1008 | 16.9 | 24.0 | 34.0 | 53.0 | 76.0 |
| 32 | 46.97 | 1215 | 21.0 | 29.0 | 41.0 | 65.0 | 93.0 |
| 33 | 75.30 | 1530 | 26.0 | 37.0 | 53.0 | 83.0 | 118.0 |

Size 3E Rotary Solenoid

X Feature Configurations & Part Numbers

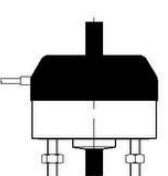
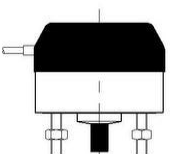
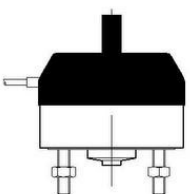


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How to Order

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

| Description | Stroke/ Direction | Norm. Axial Stroke | Armature Cover x 8 | | Armature Cover x 8 | | Armature Cover x 8 | |
|-------------|----------------------|-----------------------|--------------------|-----------|--------------------|-----------|--------------------|------------|
| | | | Standard | Endurance | Standard | Endurance | Standard | Endurance |
| 3E Rotary | 25°RH | 0.8 | M2437-0XX | E2437-0XX | M2126-0XX | E2126-0XX | M15080-0XX | E15080-0XX |
| 3E Rotary | 25°LH | 0.8 | M1245-0XX | E1245-0XX | M2276-0XX | E2276-0XX | M3374-0XX | E3374-0XX |
| 3E Rotary | 35°RH | 0.8 | M2562-0XX | E2562-0XX | M2127-0XX | E2127-0XX | M3401-0XX | E3401-0XX |
| 3E Rotary | 35°LH | 0.8 | M3398-0XX | E3398-0XX | M2209-0XX | E2209-0XX | M15005-0XX | E15005-0XX |
| 3E Rotary | 45°RH | 0.8 | M2259-0XX | E2259-0XX | M2008-0XX | E2008-0XX | M2711-0XX | E2711-0XX |
| 3E Rotary | 45°LH | 0.8 | M2419-0XX | E2419-0XX | M2453-0XX | E2453-0XX | M2712-0XX | E2712-0XX |
| 3E Rotary | 67.5°RH | 0.8 | M3278-0XX | E3278-0XX | M2128-0XX | E2128-0XX | M15040-0XX | E15040-0XX |
| 3E Rotary | 67.5°LH | 0.8 | M3279-0XX | E3279-0XX | M3004-0XX | E3004-0XX | M15107-0XX | E15107-0XX |



NSF Controls reserves the right to amend specification without prior notice. (Rev 08/21) www.nsfcontrols.co.uk

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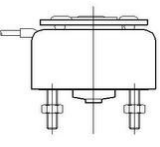
X Feature Configurations & Part Numbers



How to Order

Replace 'XX' with coil AWG required

see coil specification table

| Description | Stroke/ | Nom. Axial | Standard | | Endurance | | Standard | | Endurance | |
|--|---------|------------|-----------|------------|-----------|-----------|------------|------------|--|-------------|
| No Shafts 3 Tapped Holes x 6 Return Spring x 9  | | | Standard | Engineered | Standard | Endurance | Standard | Endurance | Standard | Endurance |
| | | | M1075-0XX | E1075-0XX | M2512-0XX | E2512-0XX | M3169-0XX | E3169-0XX | M2412-0XX | E2412-0XX |
| | | | M2159-0XX | E2159-0XX | M2992-0XX | E2992-0XX | M2978-0XX | E2978-0XX | M15128-0XX | E15128-0XX |
| | | | M2216-0XX | E2216-0XX | M2634-0XX | E2634-0XX | M2330-0XX | E2330-0XX | M2722-0XX | E2722-0XX |
| 3E Rotary | 25°RH | 0.8 | M1075-0XX | E1075-0XX | M2512-0XX | E2512-0XX | M3169-0XX | E3169-0XX | M2412-0XX | E2412-0XX |
| 3E Rotary | 25°LH | 0.8 | M2159-0XX | E2159-0XX | M2992-0XX | E2992-0XX | M2978-0XX | E2978-0XX | M15128-0XX | E15128-0XX |
| 3E Rotary | 35°RH | 0.8 | M2216-0XX | E2216-0XX | M2634-0XX | E2634-0XX | M2330-0XX | E2330-0XX | M2722-0XX | E2722-0XX |
| 3E Rotary | 35°LH | 0.8 | M2444-0XX | E2444-0XX | M3044-0XX | E3044-0XX | M15221-0XX | E15221-0XX | Customised version of M2722-027 with double 'D' flatted and tapped shaft, high temperature windings and PTFE insulation. | E2723-0XX |
| | | | | | | | | | | |
| 3E Rotary | 45°RH | 0.8 | M2556-0XX | E2556-0XX | M3045-0XX | E3045-0XX | M1135-0XX | E1135-0XX | M2616-0XX | E2616-0XX |
| 3E Rotary | 45°LH | 0.8 | M2268-0XX | E2268-0XX | M2906-0XX | E2906-0XX | M2613-0XX | E2613-0XX | M15020-0XX | E15020-0XX |
| 3E Rotary | 67.5°RH | 0.8 | M2289-0XX | E2289-0XX | M2550-0XX | E2550-0XX | M15071-0XX | E15071-0XX | M2542-0XX - | E2542-0XX - |
| 3E Rotary | 67.5°LH | 0.8 | M2288-0XX | E2288-0XX | M1330-0XX | E1330-0XX | M3381-0XX | E3381-0XX | M2940-0XX | E2940-0XX |