

Size 3E Rotary Solenoid



General Specifications:

•**Dielectric Strength:** 23-27 awg. 1000 VRMS /28-33 awg. 1200 VRMS

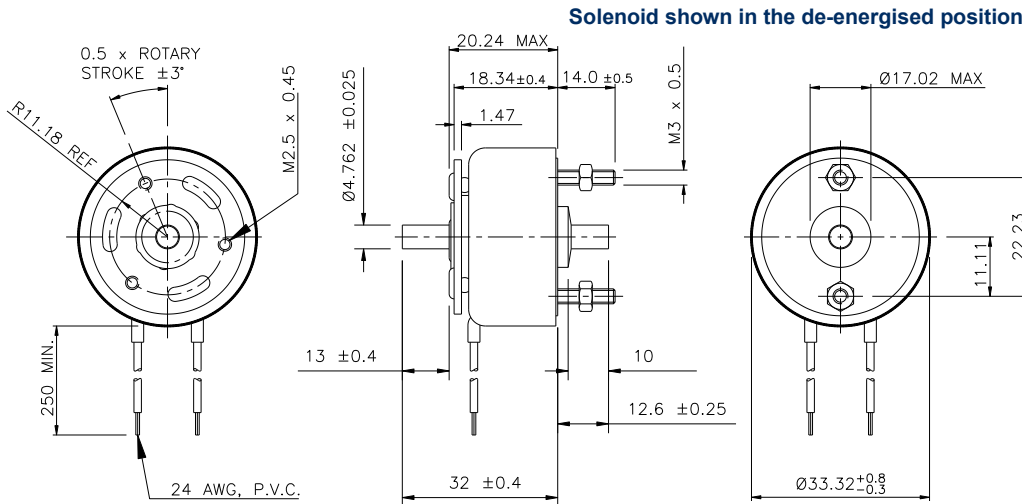
•**Recommended Heat Sink:** Maximum watts dissipated by the solenoid are based on an unrestricted flow of air at 20°C mounted on the equivalent of an aluminium plate 117.5 x 117.5 x 3.2mm min.

•**Coil 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



Notes

1. Continuously pulsed at stated watts and duty cycle
2. Single pulsed at stated watts (with coil at ambient room temperature 20°C)
3. Other coil gauges available, consult factory
4. Reference number of turns
5. Gross starting torques are shown. For net starting torque, subtract return spring torque of 13.6mNm +/-20%
6. Holding torque is shown at the stabilised temperature of 105°C, 100% duty cycle

Performance Specification

Starting Torque (mNm) @ 20° C (5)						
Maximum Duty Cycle	100%	50%	25%	10%	5%	
Stroke	Holding Torque (6)					
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

How to Order - Please Specify

- Direction and angle of rotation
- Coil awg, or voltage and duty cycle
- Supplementary 'X' features i.e. method of load take off
- Operating temperature range
- Any special features, if complex please submit a drawing of your requirements

Coil Specifications

Maximum Duty Cycle	100%	50%	25%	10%	5%		
Maximum ON Time (sec) When pulsed		100	36	8	2.8		
Maximum ON Time (sec)		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 (4)	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

Please Note: In line with continued development we reserve the right to amend specification without prior notice (Rev 03/19)

NSF Controls Ltd | Ingrow Bridge Works | Keighley | West Yorkshire | BD21 5EF | UK | Registered in England No. 3378269

T: +44 (0) 1535 661 144 | F: +44 (0) 1535 661 474 | E: info@nsfcontrols.co.uk | www.nsfcontrols.co.uk

Size 3E Rotary Solenoid

X Feature Configurations & Part Numbers

How to Order

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

Description	Stroke/ Direction	Nom. Axial Stroke	Armature Cover x 8 Armature End Shaft x 4 Return Spring x 9		Armature Cover x 8 Base End Shaft x 3 Return Spring x 9		Armature Cover x 8 Double Shaft x 3 x 4 Return Spring x 9	
			Standard	Endurance Engineered	Standard	Endurance Engineered	Standard	Endurance Engineered
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

Please Note: In line with continued development we reserve the right to amend specification without prior notice (Rev 03/19)

NSF Controls Ltd | Ingrow Bridge Works | Keighley | West Yorkshire | BD21 5EF | UK | Registered in England No. 3378269

T: +44 (0) 1535 661 144 | F: +44 (0) 1535 661 474 | E: info@nsfcontrols.co.uk | www.nsfcontrols.co.uk

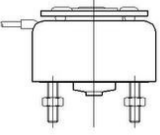
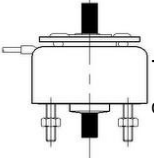
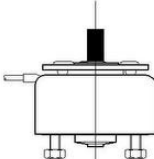
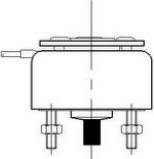
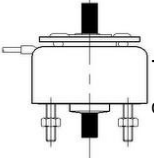
Size 3E Rotary Solenoid

X Feature Configurations & Part Numbers



How to Order

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

Description	Stroke/ Direction	Nom. Axial Stroke mm	Direction of rotation as viewed from armature end, opposite mounting studs		Standard		Endurance Engineered		Standard		Endurance Engineered		Standard		Endurance Engineered						
			Standard	Endurance Engineered	Standard	Endurance Engineered	Standard	Endurance Engineered	Standard	Endurance Engineered											
No Shafts 3 Tapped Holes x 6 Return Spring x 9 	3E Rotary	25°RH	0.8	M1075-0XX	E1075-0XX	M2512-0XX	E2512-0XX	M3169-0XX	E3169-0XX	M2412-0XX	E2412-0XX	Double Shaft x 3 x 4 3 Tapped Holes x 6 Return Spring x 9 									
	3E Rotary	25°LH	0.8	M2159-0XX	E2159-0XX	M2992-0XX	E2992-0XX	M2978-0XX	E2978-0XX	M15128-0XX	E15128-0XX										
Armature End Shaft x 4 3 Tapped Holes x 6 Return Spring x 9 	3E Rotary	35°RH	0.8	M2216-0XX	E2216-0XX	M2634-0XX	E2634-0XX	M2330-0XX	E2330-0XX	M2722-0XX	E2722-0XX	Customised version of M2722-027 with double 'D' flatted and tapped shaft, high temperature windings and PTFE insulation.									
	3E Rotary	35°LH	0.8	M2444-0XX	E2444-0XX	M3044-0XX	E3044-0XX	M15221-0XX	E15221-0XX												
Base End Shaft x 3 3 Tapped Holes x 6 Return Spring x 9 	3E Rotary	45°RH	0.8	M2556-0XX	E2556-0XX	M3045-0XX	E3045-0XX	M1135-0XX	E1135-0XX	M2616-0XX	E2616-0XX	Double Shaft x 3 x 4 3 Tapped Holes x 6 Return Spring x 9 									
	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

Please Note: In line with continued development we reserve the right to amend specification without prior notice (Rev 03/19)

NSF Controls Ltd | Ingrow Bridge Works | Keighley | West Yorkshire | BD21 5EF | UK | Registered in England No. 3378269

T: +44 (0) 1535 661 144 | F: +44 (0) 1535 661 474 | E: info@nsfcontrols.co.uk | www.nsfcontrols.co.uk