

# Size 2E Rotary Solenoid



## General Specifications:

**Dielectric Strength:** 1000 VRMS

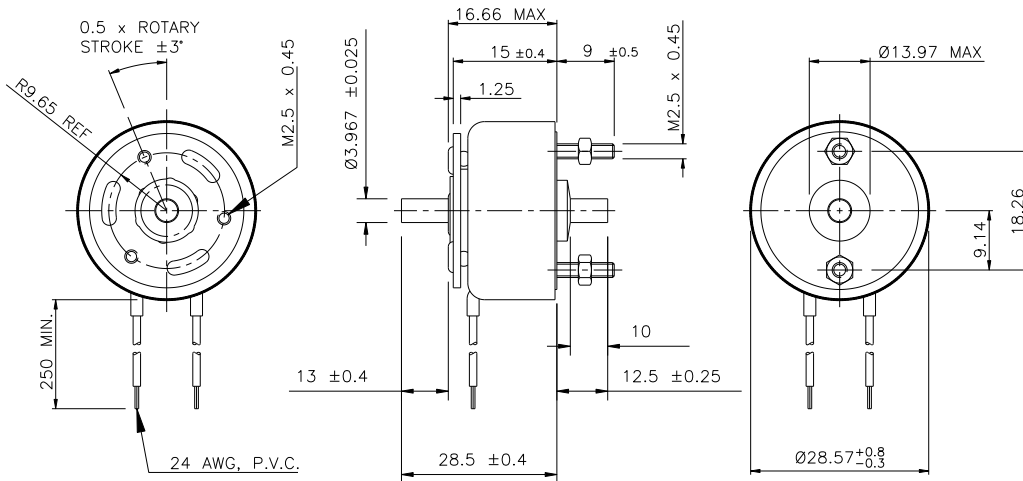
**Recommended Heat Sink:** Maximum watts dissipated by the solenoid are based on an unrestricted flow of air at 20°C mounted on the equivalent of an aluminium plate

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

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

**Return Spring Torque:** 6.8 mNm +/- 20%

**Weight:** 56.7 g



Solenoid shown in the de-energised position

## 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 6.8mNm +/-20%
6. Holding torque is shown at the stabilised temperature of 105°C,

## Performance Specification

Starting Torque (mNm) @ 20° C (5)						
Maximum Duty Cycle	100%	50%	25%	10%	5%	
Stroke	Holding Torque (6)					
	25°	56.5	22.6	45.2	79.1	192.1
	35°	22.6	33.9	56.5	124.3	146.9
	45°	33.9	11.3	22.6	45.2	79.1

## 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	7	2.5
continuously (1)					
Maximum ON Time (sec)		162	44	8	2.8
for single pulse (2)					
Watts (@20° C)	7	14	28	70	140
Ampere Turns (@ 20° C)	425	602	849	1350	1904

### Coil Data

avg. (3)	Resistance (@ 20°C)	# Turns (4)	Nominal DC Voltage				
24	0.68	130	2.2	3.2	4.5	7.1	10.0
25	1.16	174	2.8	4.0	5.7	9.0	12.7
26	1.96	231	3.6	5.1	7.2	11.5	16.2
27	3.16	296	4.5	6.4	9.0	14.4	20.0
28	5.10	378	5.7	8.1	11.5	18.2	26.0
29	6.94	423	7.0	9.9	13.9	22.0	31.0
30	11.03	530	8.8	12.5	17.7	28.0	40.0
31	16.85	649	11.0	15.6	22.0	35.0	49.0
32	28.15	858	13.9	19.8	28.0	44.0	63.0
33	42.75	1036	17.5	25.0	35.0	56.0	79.0
34	69.56	1312	23.0	32.0	45.0	72.0	101.0

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 2E 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	Standard		Endurance		Standard		Endurance	
			Standard	Engineered	Standard	Engineered	Standard	Endurance		
Direction of rotation as viewed from armature end, opposite mounting studs	<p>Armature Cover x 8 Armature End Shaft x 4 Return Spring x 9</p>	25° RH	M1244-0XX	E1244-0XX	M1024-0XX	E1024-0XX	M2390-0XX	E2390-0XX		
			2E Rotary	M3259-0XX	E3259-0XX	M2452-0XX	E2452-0XX	M2389-0XX	E2389-0XX	
			2E Rotary	M1294-0XX	E1294-0XX	M2116-0XX	E2116-0XX	M3405-0XX	E3405-0XX	
			2E Rotary	M1159-0XX	E1159-0XX	M15004-0XX	E15004-0XX	M15111-0XX	E15111-0XX	
	35° RH	<p>Armature Cover x 8 Base End Shaft x 3 Return Spring x 9</p>	35° RH	M2264-0XX	E2264-0XX	M2117-0XX	E2117-0XX	M1344-0XX	E1344-0XX	
				2E Rotary	M2265-0XX	E2265-0XX	M2450-0XX	E2450-0XX	M15046-0XX	E15046-0XX
				2E Rotary	M1159-0XX	E1159-0XX	M15004-0XX	E15004-0XX	M15111-0XX	E15111-0XX
				2E Rotary	M2264-0XX	E2264-0XX	M2117-0XX	E2117-0XX	M1344-0XX	E1344-0XX
	45° LH	<p>Armature Cover x 8 Double Shaft x 3 x 4 Return Spring x 9</p>	45° LH	M2265-0XX	E2265-0XX	M2450-0XX	E2450-0XX	M15046-0XX	E15046-0XX	
				2E Rotary	M2265-0XX	E2265-0XX	M2450-0XX	E2450-0XX	M15046-0XX	E15046-0XX
				2E Rotary	M2265-0XX	E2265-0XX	M2450-0XX	E2450-0XX	M15046-0XX	E15046-0XX
				2E Rotary	M2265-0XX	E2265-0XX	M2450-0XX	E2450-0XX	M15046-0XX	E15046-0XX

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 2E 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		No Shafts 3 Tapped Holes x 6 Return springs x 9		Armature End Shafts x 4 3 Tapped Holes x 6 Return springs x 9		Base End Shafts x 3 3 Tapped Holes x 6 Return springs x 9		Double Shafts x 3 x 4 3 Tapped Holes x 6 Return springs x 9	
			Standard	Engineered	Standard	Engineered	Standard	Engineered	Standard	Engineered		
2E Rotary	25° RH	0.6	M2168-0XX	E2168-0XX	M1094-0XX	E1094-0XX	M2933-0XX	E2933-0XX	M2411-0XX	E2411-0XX		
2E Rotary	25° LH	0.6	M2346-0XX	E2346-0XX	M2670-0XX	E2670-0XX	M2748-0XX	E2748-0XX	M2537-0XX	E2537-0XX		
2E Rotary	35° RH	0.6	M2193-0XX	E2193-0XX	M2685-0XX	E2685-0XX	M1088-0XX	E1088-0XX	M2994-0XX	E2994-0XX		
2E Rotary	35° LH	0.6	M2483-0XX	E2483-0XX	M15094-0XX	E15094-0XX	M15615-0XX	E15615-0XX	M15220-0XX	E15220-0XX		
2E Rotary	45° RH	0.6	M1079-0XX	E1079-0XX	M2362-0XX	E2362-0XX	M3265-0XX	E3265-0XX	M3244-0XX	E3244-0XX		
2E Rotary	45° LH	0.6	M2744-0XX	E2744-0XX	M3112-0XX	E3112-0XX	M2436-0XX	E2436-0XX	M3245-0XX	E3245-0XX		

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](mailto:info@nsfcontrols.co.uk) | [www.nsfcontrols.co.uk](http://www.nsfcontrols.co.uk)