

# Rotary Solenoid

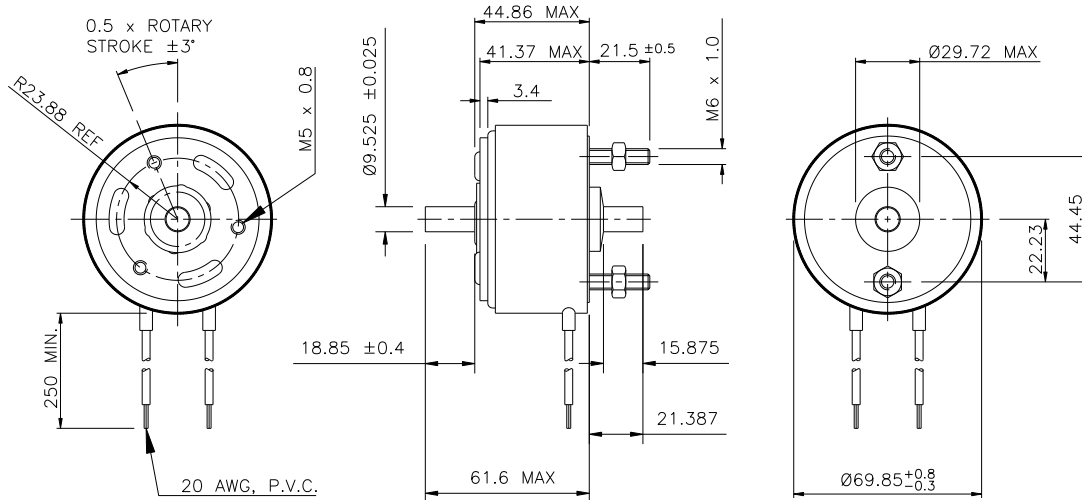
## Size 7S



# NSF

Innovative solutions  
for a changing world

### Dimensions



Solenoid shown in the de-energised position

### Performance Specifications

Starting Torque (mNm) @ 20° C						
Maximum Duty	100%	50%	25%	10%	5%	
Stroke	Holding Torque					
25°	2260	1243	2689	3752	4791	5266
35°	-	678	1356	2486	4294	4746
45°	1469	565	994	1853	3367	3706
67.5°	-	283	576	1007	1978	2181
95°	678	170	396	723	1187	1311

### General Specifications

**Dielectric Strength:**  
23-29 awg. 1200 VRMS  
30-33 awg. 1500 VRMS

**Coil Resistance:**  
23-30 awg +/- 5% tolerance  
31-33 awg +/- 10% tolerance

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

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

**Weight:** 1.02 Kg

**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  
384.2 x 384.2 x 3.2mm  
min.

### Coil Specifications

Maximum Duty Cycle	100%	50%	25%	10%	5%
Maximum ON Time (sec) when pulsed continuously		80	38	16	5.7
Maximum ON Time (sec) for single pulse		138	50	18	6.4
Watts (@ 20° C)	35	70	140	350	700
Ampere Turns (@ 20° C)	1570	2230	3150	5000	7034

#### Coil Data

awg.	Resistance (@ 20°C)	# Turns	Nominal DC Voltage				
23	8.09	780	16.3	23.0	33.0	52.0	73.0
24	12.34	949	21.0	29.0	41.0	65.0	92.0
25	18.62	1148	26.0	37.0	52.0	83.0	116.0
26	30.84	1472	33.0	47.0	66.0	105.0	147.0
27	48.77	1854	41.0	59.0	83.0	132.0	185.0
28	81.14	2436	52.0	74.0	105.0	167.0	234.0
29	121.0	2944	65.0	92.0	130.0	206.0	290.0
30	190.0	3650	82.0	116.0	164.0	261.0	367.0
31	275.0	4175	103.0	147.0	208.0	329.0	463.0
32	440.0	5292	130.0	169.0	239.0	380.0	-
33	715.0	6650	158.0	223.0	316.0	-	-

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

NSF Controls Ltd | Ingrow Bridge Works | Keighley | West Yorkshire | BD21 5EF | UK | E: [info@nsfcontrols.co.uk](mailto:info@nsfcontrols.co.uk) | T: +44(0)1535 661144

# Size 7S 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		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
7S Rotary	25°RH	1.9	M3057-0XX	E3057-0XX	M2477-0XX	E2477-0XX	M2309-0XX	E2309-0XX
7S Rotary	25°LH	1.9	M1354-0XX	E1354-0XX	M2592-0XX	E2592-0XX	M15009-0XX	E15009-0XX
7S Rotary	35°RH	2.0	M15076-0XX	E15076-0XX	M2355-0XX	E2355-0XX	M3406-0XX	E3406-0XX
7S Rotary	35°LH	2.0	M15485-0XX	E15485-0XX	M2323-0XX	E2323-0XX	M15103-0XX	E15103-0XX
7S Rotary	45°RH	2.0	M1355-0XX	E1355-0XX	M3070-0XX	E3070-0XX	M1428-0XX	E1428-0XX
7S Rotary	45°LH	2.0	M1356-0XX	E1356-0XX	M3148-0XX	E3148-0XX	M15054-0XX	E15054-0XX
7S Rotary	67.5°RH	2.0	M2809-0XX	M2809-0XX	M2400-0XX	E2400-0XX	M1480-0XX	E1480-0XX
7S Rotary	67.5°LH	2.0	M15061-0XX	E15061-0XX	M2303-0XX	E2303-0XX	M1484-0XX	E1484-0XX
7S Rotary	95°RH	2.2	M1178-0XX	E1178-0XX	M-3069-0XX	E3069-0XX	M1334-0XX	E1334-0XX
7S Rotary	95°LH	2.2	M1357-0XX	E1357-0XX	M-2858-0XX	E2858-0XX	M15121-0XX	E15121-0XX

# Size 7S Rotary Solenoid

## X Feature Configurations & Part Numbers



### How to Order

Replace 'XX' with coil AWG required

see coil specification table

Description	Stroke/ Direction	Norm. Axial Stroke mm	No Shafts 3 Tapped Holes x 6 Return Spring x 9		Armature End Shaft x 4 3 Tapped Holes x 6 Return Spring x 9		Base End Shaft x 3 3 Tapped Holes x 6 Return Spring x 9		Double Shaft x 3 x 4 3 Tapped Holes x 6 Return Spring x 9	
			Standard	Endurance Engineered	Standard	Endurance Engineered	Standard	Endurance Engineered	Standard	Endurance Engineered
7S Rotary	25°RH	1.9	M1352-0XX	E1352-0XX	M15491-0XX	E15491-0XX	M2490-0XX	E2490-0XX	M2415-0XX	E2415-0XX
7S Rotary	25°LH	1.9	M2590-0XX	E2590-0XX	M1197-0XX	E1197-0XX	M3362-0XX	E3362-0XX	M15116-0XX	E15116-0XX
7S Rotary	35°RH	2.0	M2388-0XX	E2388-0XX	M15492-0XX	E15492-0XX	M15498-0XX	E15498-0XX	M15134-0XX	E15134-0XX
7S Rotary	35°LH	2.0	M15616-0XX	E15616-0XX	M15493-0XX	E15493-0XX	M1467-0XX	E1467-0XX	M15137-0XX	E15137-0XX
7S Rotary	45°RH	2.0	M2950-0XX	E2950-0XX	M3007-0XX	E3007-0XX	M1312-0XX	E1312-0XX	M15502-0XX	E15502-0XX
7S Rotary	45°LH	2.0	M3096-0XX	E3096-0XX	M15014-0XX	E15014-0XX	M1317-0XX	E1317-0XX	M15503-0XX	E15503-0XX
7S Rotary	67.5°RH	2.0	M3350-0XX	E3350-0XX	M15495-0XX	E15495-0XX	M15500-0XX	E15500-0XX	M15504-0XX	E15504-0XX
7S Rotary	67.5°LH	2.0	M15158-0XX	E15158-0XX	M15496-0XX	E15496-0XX	M15501-0XX	E15501-0XX	M15505-0XX	E15505-0XX
7S Rotary	95°RH	2.2	M1353-0XX	E1353-0XX	M15104-0XX	E15104-0XX	M2869-0XX	E2869-0XX	M3037-0XX	E3037-0XX
7S Rotary	95°LH	2.2	M3289-0XX	E3289-0XX	M15497-0XX	E15497-0XX	M1316-0XX	E1316-0XX	M15506-0XX	E15506-0XX

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

NSF Controls Ltd | Ingrow Bridge Works | Kelghey | West Yorkshire | BD21 5EF | UK | E:info@nsfcontrols.co.uk | T: +44(0)1535 661144